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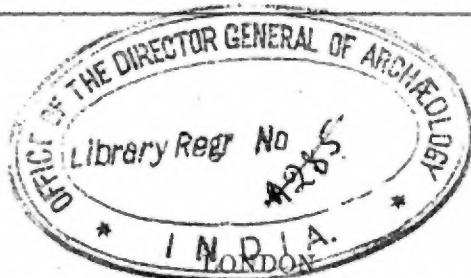
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JOURNAL

OF

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

Eighty-second Session—1915-16.

ADDRESS BY THE PRESIDENT, MR. ERNEST NEWTON, A.R.A.,
at the Opening General Meeting, Monday, 1st November, 1915.

LADIES AND GENTLEMEN,—When I had the honour of addressing you at the opening of the Session last year we were under the cloud of a great war in its early stages. Many of us may have hoped that by now this cloud would have lightened and that peace might at any rate be in sight. Unhappily, this is not the case. The cloud is darker and more menacing than ever, and we cannot but realise that peace is still far off. As the months go on, the effect of the war is being more and more severely felt by many architects, and the difficulty of organising means by which we can help those whose work has come to a standstill is a very real one. I will give you a brief outline of what is being done by the various war committees, but I should like to say that we should welcome suggestions of ways in which we could find useful employment for those who are in great need of it. In some cases, of course, it is necessary to give direct financial help, but our aim is to do this as little as possible.

Nearly every time that I have addressed a meeting since I became President I have asked for funds to carry on the work to which we have set our hands. In the desert of unemployment there are still a few oases, and it is to the dwellers in these fertile patches that our appeal is made. Many personal requests that I have made during the past year have been generously responded to, but it is more than likely that some prosperous people have been overlooked. If this is the case I hope they will consider that this appeal is made direct to them, and that they will subscribe to our War Funds as liberally as they can. I should like to be able to double the amount subscribed so far.

The sums that have been collected or promised are as follows :—

Prince of Wales's Fund	..	..	..	..	..	£272	10	0
Architects' Relief Fund	..	..	..	..	..	1,258	5	9
Professional Employment Fund	..	..	..	..	..	390	5	0
Architects' War Loan Fund	..	..	..	..	..	294	0	0

And in addition there is a considerable sum from the sales of the Artists' War Relief Exhibition, which was opened by Her Royal Highness Princess Louise in July and remained open during August and September. The most important of the War Committee's schemes for dealing with unemployment is the Civic Survey, and I cannot better explain the character and scope of this scheme than by reading to you the note published in the Institute JOURNAL for 28th August last :—

It will be remembered that at the outbreak of the war the Royal Institute of British Architects called a meeting of architects representative of the whole profession to discuss the situation, and that this meeting decided to form the Architects' War Committee. The question of unemployment caused by the War was referred to an Employment Committee, which appointed a sub-committee to suggest some scheme of employment the outcome of which should be of permanent value to the community. Their deliberations resulted in a comprehensive and far-reaching scheme for

the promotion of Civic Surveys in all the more densely populated districts of the country. A clear exposition of the aims and methods of a Civic Development Survey as contemplated by the sub-committee will be found in a Paper by Mr. H. V. Lanchester, read at the Institute last December and published in the Institute JOURNAL of the 9th January. The scheme having been approved by the War Committee and other interested bodies, a memorial was addressed to the Professional Classes Sub-Committee of the Government Committee for the Prevention and Relief of Distress, appealing for a grant to enable a scheme of Civic Surveys to be set on foot, the responsibility for the work to be in the hands of a committee made up of representatives of the Royal Institute of British Architects, Architects' War Committee, Architects' Benevolent Society, Surveyors' Institution, Professional Classes War Relief Council, National Housing and Town Planning Council, Garden Cities & Town Planning Association, Town Planning Institute, London Society, and other bodies whose services may be of value.

The appeal met with a favourable response; the Government has sanctioned Civic Surveys in three districts—viz., Greater London, South Lancashire, and South Yorkshire, and has made a preliminary grant of £1,000 for the work. The disbursement of the funds is in the hands of the Architects' Benevolent Society, acting with other Professional Relief Societies.

The Royal Institute had already made itself responsible for the expenses of the War Committee, and is now providing accommodation for the work of the Civic Survey of Greater London. On the 19th July actual work was started in the old Council room adjoining the Institute Reading Room, and arrangements have since been made for the accommodation of workers in the spacious galleries on the ground floor of the Institute premises. At the first meeting of the new workers a short description of the aims and scope of the Survey was given by the Hon. Director for Greater London, Mr. A. R. Jemmett.

The scheme of the Civic Survey of Greater London is devised for the purpose of collecting and recording (as far as possible in diagrammatic or graphic form) and comprehensively arranging statistics and facts of Greater London as it exists to-day, and so providing in a manner easily followed and understood all the information interesting and useful to any person concerned with the control, development, or understanding of all matters pertaining to Greater London. It is a fact that a vast amount of valuable information accumulated by experts lies buried away in blue-books and archives quite out of reach of the ordinary citizen. The results of labour quietly and conscientiously devoted to research and codification ought not to be left to crumble and decay in obscurity, particularly as human energy is awakening to the importance of future development of town and country, upon which subject these records have such an important bearing.

The magnitude and importance of the work of the Civic Survey is so obvious that it has by its very usefulness attracted many architects of established reputation. Public bodies and the public generally may some day be grateful for the war which has remotely led to the gathering together for this work of men specially trained, whom in times of peace it would have been impossible to commandeer for such labour.

The work to be done in collecting and arranging includes correcting and bringing up to date all that has so far been done; and it is hoped to add an additional charm to the work, when completed, by giving it an æsthetic quality worthy of the profession of architecture. Since the work started much information has been collected by visiting heads of departments and local councils, and by enlisting the sympathy of officials, which has always been freely bestowed, it being quickly recognised that the Civic Survey scheme does not trench on the preserves of any existing society, or disturb any vested interests, but seeks only to deal with things as they are, not as they were or will be. The fact that many of the workers are personally acquainted with officials and experts enables much information to be collected without friction and with scarcely any loss of time and energy on formality and routine. The immense variety of the work makes it easy for the directors to discriminate between the workers, and to see that each man is given the kind of work to which he is best inclined and fitted.

The ready help and courtesy afforded by the officials of the various bodies associated in the work has stimulated happy co-operation and good feeling among all those engaged in it. All who take the pains to understand the scheme must recognise that, apart from its value as a basis for town planning, it is a labour of far-reaching utility.

Throughout the war we have kept in touch with the Professional Classes War Relief Committee, and this committee has helped architects' families by receiving their wives into the maternity home and assisting in the education of their children. It has also organised summer holidays for children and has helped in many other ways. In connection with this Committee we have undertaken to help in a Christmas Sale at the Albert Hall, and a special Committee has been formed for this purpose. We shall be glad to receive the names of ladies who are willing to make articles for this Sale.

The Selection Committee is now engaged in preparing a voluntary register of architects suitable for military, civil, or munitions work. It has been felt that the Government has not been able to make sufficient use of architects, as the information at its disposal was not sufficiently complete. It

will be remembered that early in the war we made, through the Architects' War Committee, a general offer of service from the whole body of architects. When the war broke out an enormous amount of work suddenly fell on all Government Departments, and more especially on the War Office. Probably on this account our general offer of service did not receive as much attention as we hoped might have been the case, although we have been able to supply several men for responsible positions, but as this offer had been made by me as Chairman of the Architects' War Committee and President of the Royal Institute of British Architects, I thought it well to call at the War Office personally in May last and renew it in greater detail. The suggestions I then made were most courteously received, and I understand have since been circulated to all the commands in the British Isles.

Mr. Stanley Peach, who, with Mr. Munby, has been most indefatigable and devoted an enormous amount of time to this branch of our activities, finds that even now the details at the disposal of the Government are not sufficient, and that the only way in which we can be of real service is to have names and qualifications ready beforehand, so that the men required may be provided at once. I regret very much that some controversy should have arisen out of our offer of service. Our sole object was, and is, to assist the Government by every means in our power, and anything in the way of controversy is a hindrance and a waste of energy.

The Professional Employment Committee, in addition to the Civic Survey already alluded to, has been able to find useful work of a very varied nature for a great many men, but there are, of course, certain cases where no suitable employment can be found, and in these cases the Architects' Benevolent Society and the Artists' General Benevolent Institution have given direct assistance. This Committee has held its meetings on the premises of the Society of Architects, which has given the services of its staff for the purpose. We have also started a Loan Fund to assist men in stable positions to tide over a difficult period.

The Institute has not been unmindful of the probable burden of Income Tax on those architects whose professional income has seriously diminished and promises to vanish altogether. A letter was addressed to the Inland Revenue Office in August last calling attention to the fact that it would be impossible for many architects to pay income tax on a three years' basis, and suggesting that it may be permitted to make the returns during the war on the actual year. The Institute also joined with the Institution of Civil Engineers and other bodies in sending a communication of a similar kind to the Chancellor of the Exchequer. A certain measure of relief has been promised on professional incomes, but it hardly meets the case of architects whose incomes are practically non-existent. Architects are in the peculiar position of not only having to face an ordinary diminution of work consequent on the war, but of having their means of livelihood still further reduced by the action of the Government in stopping public building, and of the Government Committee in recommending the stoppage of all private building. In these circumstances, we have a peculiar claim to consideration, and a further letter has been written to the Chancellor of the Exchequer.

I have only been able to give a very slight outline of all that is being done under the War Committee, but I hope I have said enough to indicate that if some of our ordinary activities are necessarily curtailed we have replaced them by others of more immediate importance during the War. Our Committees are large ones on paper—but the actual work is being performed by a few, and it is possible that on that account only a few know how much is being done. Mr. MacAlister and the Institute staff are coping heroically with all the extra labour thrown upon them. The work of the Architects' Benevolent Society has been enormously increased, and Mr. Dircks, as Secretary, cheerfully shoulders a new burden every day. The Architectural Association has continued its recruiting work and has sent large numbers of recruits to various branches of the services. I understand that something like 850 men have been added to the forces through its agency, and in many cases, where a special type of man was required, the commanding officers have expressed great satisfaction with the men sent to them through the Architectural Association War Service Bureau. The Association is keeping in

touch with all these men, and is now asking for contributions for comforts for them. I hope every one who can will spare something for this Fund.

Altogether we have serving in His Majesty's Forces over 1,800 architects, including assistants, pupils and students, and teachers of architectural schools. Last November there were about 1,000. At that time nearly all these young men were in training at home. Now most of them are abroad, many have been wounded, and some have given up their lives for their country.

The end appears to be far off, and there are very few of us who do not live in daily and hourly anxiety as to the fate of those who are very dear to us. It is a weary business waiting, but it is the lot of those who are too old to fight. Many of us, too, have the added anxiety of vanishing incomes and increased cost of living and taxation; but as the character of the younger generation is now being formed on the battlefield, the character of the older generation is also being put to the test. The situation is serious; more soldiers are wanted, and it is difficult to look with a lenient eye on the many young men who walk our streets, apparently indifferent to the stern claims of duty. But while we are tempted to judge them harshly let us remember that courage of a very special kind is needed now. The great wave of enthusiasm which carried along those who nobly went at the first call without calculation or other thought than that they were wanted, has spent itself. The stern meaning of war is understood, and the reality of the tremendous sacrifice that these first gallant recruits have made is clearly grasped. The business community has settled down to war conditions, staffs have been adjusted to these conditions, and employers do not perhaps encourage their men as they did at the beginning of the war to go out and do battle for their country.

Then, too, what are the surroundings of these young men? Is there a spirit of sacrifice abroad? Do they read a stern resolve in the faces and lives of the community? Do they not on the contrary see the War exploited and vulgarised for advertisement? Are not theatres and music halls filled to overflowing by an apparently thoughtless crowd? Is not life to all appearance just as it was? Are our young men led and inspired by noble speeches, to throw aside comfortable ease and expose themselves to all the horrors of war? As far as my observation goes they are not. We have instead the exasperating and dead appeal of the pictorial poster. At recruiting meetings young men are often cajoled and flattered or insulted and threatened by turns. I am certain that the large majority of them are sound at heart and, if the right note is struck, will do their duty as those who have already gone have done theirs. We who are too old for active military service must let them know that we realise all that we are asking of them. It is easy for us to say: "Would I were a young man." I hope we should all have gone; but none of us can realise the struggle of the man who hesitated to go at first, and is now asked for what has been well described as "3-o'clock-in-the-morning courage." But the decision can no longer be put off. The time for choice is over. No one fit for his country's service has a right to live at ease and carry on his work protected by those who have not weighed the *pros* and *cons* but have seen only one path and have trodden it fearlessly. Many of these men have given up promising careers and good positions, and it is unthinkable that, now the need is so great, others should hesitate to make the same sacrifice.

It is hard, too, for some of us older men, to sit still and not criticise this or that apparent act of omission or commission of the Government. Nearly everyone has somewhere in his secret recesses the conviction that he could do the work better himself, but let him remember that the slashing critic is often a very mediocre performer.

We are passing through the accustomed phases. First, the light-hearted disdain of the enemy, the unreasoning certainty that everything is all right and that victory is ours merely by wishing for it. Then comes the second period, the period in which we are now, when there is a sort of uneasy feeling that we cannot go on in a nice comfortable optimistic everything-as-usual kind of way, that something has to be done, we don't quite know what, we are depressed without quite knowing why, and we begin to look about for scapegoats.

But when we are tempted to be impatient let us see what actually has been done in fifteen months. We have performed the miracle of raising, training and equipping an immense army. We have entirely re-organised and immensely increased our munition factories. Germany has lost practically all her Colonies, and all her ships have been driven from the seas. These many months of mutual anxiety and fierce fighting have consolidated the British Empire as nothing else could have done, have revealed to us the splendid character of our manhood, and given the lie to the croakers who declared we were a decadent race. They have, too, tightened the bonds of friendship with our Allies—particularly with our great neighbour France, a country especially dear to architects—and out of the great welter of war is emerging a clearer view of the immense issues at stake.

I think then that it is our part to have a fixed and serene intention to be victorious, to remember the tremendous responsibilities of our Government and to lighten those responsibilities by doing everything that we can to assist and support it, and so help to form a united public opinion resolute to do everything possible, and impossible, to bring the war to a victorious end.

I feel, ladies and gentlemen, that I owe you an apology for dwelling so much on the war and not at all on Architecture. I will confess that I had intended merely to give a short account of what we were doing for our brother architects, but my pen has run away with me. After all, what is there really of importance except this great war? On the result everything depends, and everyone can contribute something towards this result, not by morbid brooding, not by gloomy forebodings, but by realising its tremendous seriousness, understanding the sacrifices which must be made by us all, and by believing that victory is certain, if we as a Nation bend our whole energies to the task, and shrink from nothing which will give us that victory, without which life would not be worth living.

PRESENTATION OF THE SUBSCRIPTION PORTRAIT OF MR. REGINALD BLOMFIELD, R.A.—VOTE OF THANKS FOR THE ADDRESS.

The PRESIDENT, at the conclusion of his Address, unveiled and formally presented to the Institute on behalf of the subscribers the portrait of Mr. Reginald Blomfield, R.A., Past President. "The portrait," said Mr. Newton, "will be one of the most appreciated of our valuable collection. Mr. Shannon has had an unusually difficult task. We know our late President under almost every aspect but that of repose. Mr. Shannon has had, in this rare attitude, to suggest and convey to us a President full of movement, energy, and brisk decision. I am sure you will agree that Mr. Shannon has produced not only a fine picture, but also what is familiarly called a speaking likeness."

Mr. REGINALD BLOMFIELD, R.A., who rose to propose a vote of thanks for the President's Address, referred first to the happy way in which the President had discharged the delicate function of unveiling the portrait. He (Mr. Blomfield) could not say whether it was a good likeness, but it was certainly a very good picture. They owed their gratitude to Mr. Shannon for the skill and ability he had lavished on the portrait. He had not spared himself, or his sitter either. Mr. Blomfield went on to say that he should like to refer again to the two years during which he occupied the chair which Mr. Newton filled with such dignity and wisdom. It seemed ages ago, but he should always preserve a vivid memory of that very strenuous

time. He had come into touch with many old friends, and he hoped he had made some new ones; but from all alike he had found the most unflinching loyalty in the work of the Institute. The war had suspended that work, but he cherished the hope that happier times would come, and he trusted that the President would see out his time under those happier conditions. But there was a long way to go yet, and he felt grateful to the President for his outspoken utterance on the state of opinion which still seemed to prevail in this country. There was no doubt that the heart of the country was sound, but there were too many active young men holding back. There could be no doubt where one's duty lay, and for all young men of military age who were sound and fit there was only one duty, and that was to join the Colours. There might be cases in which it was impossible for them to do so, but there should be very valid reasons. As for the rest of us, we could only do the best we could, and he would commend to the President a useful and healthy exercise if he wanted it, to burrow in the trenches at Woldingham. He would live there a simple but very primitive life. He had noticed in the trenches near where he had been working architects doing very excellent work. But there were too few of them, and some seemed too active for the job; he thought the activities of the latter might be more use-

fully employed elsewhere. Mr. Blomfield, in conclusion, said that he had much pleasure in proposing a very hearty vote of thanks to the President for his excellent Address. Mr. Newton was a very old friend of his, and he would not dwell upon his personal charm, which was known to all of them. He had had to discharge his duties under very hard conditions, and they would all agree that he had done so with great tact and discretion. Members would appreciate from the account he had given them what immense activity he had put forward in his endeavour to meet an unthought-of situation.

Mr. J. A. GOTCH, F.S.A., *Vice-President*, in seconding the vote of thanks, said that the Opening Address this year would certainly be in the nature of an historic address, inasmuch as the circumstances under which it was delivered precluded almost all the usual references to those things which they, as architects, held most dear. It was impossible that it could be otherwise, because war was an inevitable foe to art, and especially to architecture; and there was really nothing for the President to say that particularly appertained to those subjects. With regard to the rather gloomy views that the President took in some parts of his Address, he (Mr. Gotch), who came from the country, did not go all the way with him. No doubt in London and other large towns a great many young men might be seen who apparently ought to be otherwise employed; but it might perhaps be taking it too much for granted to assume that they had not attempted, in some sort of way, to help. And that difficulty would be partly met when the armlets of which they had heard were issued, and those who had the right to wear them would do so. We should then see a considerable diminution in the number of apparent slackers. Coming from a provincial town, he could say that they did not see very many young men who could be better employed, and there was no feeling of gloom, although people had their ups and downs in cheerfulness. But there was no lack of response in his part of the world to the demand for recruits. They had been sending from the county of Northampton and from the town in which he lived a very considerable number of recruits—particularly recently. Northamptonshire was a great boot-making county, and of course all the labour possible had been obliged to be employed on the production of boots for the Army.] Now the need for them was getting less the

young men were flocking to the recruiting office, and the town was full of soldiers, though they were not all natives. He assured them that the general aspect in that part of the country with which he was familiar was thoroughly warlike. In motoring about the country, go in whatever direction one might, one could not get out of sight of soldiers. His observations therefore induced him to take a more cheerful view than that which the President had taken in his Address, and which no doubt his experience justified. As they could not this year deal with their proper subject, Architecture, he hoped that when Mr. Newton's successor took the chair and had to deliver the next annual address, he would be in an atmosphere which was less warlike, and that they might then see the clouds beginning to roll away and reveal some of those architectural subjects and architectural splendours which for the present were veiled.

THE PRESIDENT, in responding to the vote of thanks, said: Mr. Gotch and I have had several little passages of arms on the subject of what he calls my pessimism, and what I call his optimism, and we have this afternoon agreed on a word which is a sort of amalgam. All I want is that the people should exercise a little foresight, and that they should realise the difficulties before us. It is not pessimism to have a proper realisation of things as they actually are. In responding to the vote of thanks, one feeling which I had, and which I am sure my predecessor had too when he was nominated for this post, was surprise at being expected to play the part of "first old man." I suppose no one feels old unless he is called upon to occupy a position of this kind, and then he makes a mental calculation of a very sobering sort. I must confess, too, that when I was invited to succeed Mr. Blomfield it was not without hesitation that I accepted the invitation. It is the worst of these great and popular Presidents, that they make the office so difficult for their successors. The war, too, has added very much to the difficulties and responsibilities of the position, and it has created all sorts of situations for which we have had no precedents whatever to guide us. But I have found myself surrounded by friends who have helped me to steer through these uncharted waters, and I can only fervently hope that when the time comes for me to hand on my command to my successor it may be in times of peace.

REVIEWS.

VALUATIONS.

Valuations: A Text-book on Valuation applied to the Sale and Purchase of Freehold, Leasehold, Copyhold, and Leasehold Property, Assessments to Duties under the Finance Act, 1910, the Enfranchisement of Copyhold Estate, Assessment for Rating Purposes, Compensation on Compulsory Purchase, and Valuation for Advances on Mortgage. By Samuel Skrimshire, F.S.I. 80. Lond. 1915. 10s. 6d. net. [E. & F. N. Spon, Ltd., 57 Haymarket, S.W.]

A great deal of information on this very technical subject can be gathered from a careful perusal of the contents of the extremely valuable book which has been written by Mr. S. Skrimshire. The work is one which will be found useful not only to the student of valuation, for whom it is more especially written, but also to the man in active practice, who would find it a serviceable book of reference.

In the preface the author states that he has endeavoured to give the maximum amount of useful matter in the minimum of space, and he has certainly succeeded in laying before the reader a great deal of instructive information in a most lucid form, but it is a question whether a good deal of repetition and reiteration might not with advantage have been avoided.

The contents of chapter 5 might have been amalgamated with those of chapter 6 under the heading of Factors in Value, and the worked examples in the latter part of chapter 5 might have been included in chapter 7, which is entirely devoted to giving worked examples of valuations of various properties, in illustration of the subject-matter contained in the two preceding chapters.

The instruction given in chapters 3 and 4 with regard both to the use and the formation of valuation tables will be found most valuable to the student, two or three examples in explanation of the working of the different tables being given in each case, where I think one example would have sufficed, while in explanation of the table to be used in connection with the renewal of leases, no less than twelve examples, all practically on the same basis, are given.

Useful information will be found in chapter 8 with regard to the valuations to be made and the calculations involved in connection with the assessment of the duties imposed under the Finance (1909-10) Act, 1910, worked examples being given under the various sections in explanation of the working of the Act; but the author very wisely calls the attention of the reader to the fact that cases are still before the Court of Appeal and the House of Lords, and that impending judgments will afford reliable direction with regard to the proper legal construction of certain provisions about which there is at present considerable uncertainty.

In the succeeding chapters (9, 11 and 12) the author deals with the subject of copyhold estate and the customs of manors, and the chief considerations

to be taken into account in dealing with the enfranchisement of this class of property, gives an outline of the basis and incidents of rating, and of the procedure within and without the metropolitan area, and explains how the general principles of valuation are to be applied in the assessment of compensation in the cases of compulsory purchase, brief references being given to the clauses of the principal Acts of Parliament governing these cases.

Under each section worked examples are given at the end of each chapter.

Chapter 10 is devoted by the author to advice to pupils entering for an examination, with regard to a number of points of interest to examinees; while in the appendix at the end of the book, in addition to a great deal of useful general information, examples of questions for self-education are given with their solutions.

There is a printer's error on page 370, Question No. 40, the term being given as two years instead of 21 years.

In a work dealing with this technical subject, there are, of course, several points of detail which one would be inclined to criticise and question, but no one could possibly question the opinion that the book is an exceedingly useful and valuable work to anyone who wishes to study the subject of valuations.

HORACE CHESTON [F.]

Books Received.

Rivington's Notes on Building Construction: a Book of Reference for Architects and Builders and a Text-book for Students. Edited by W. Noble Twelvetree. New Edition, entirely re-written. Part I. with 484 illustrations. Part II. with 305 illustrations. 80. Lond. 1915. 7s. 6d. net each part. [Longmans, Green & Co., 39 Paternoster Row.]

Levelling and its General Application. 3rd Edition. By Thomas Holloway. Revised by H. T. Tallack. 80. Lond. 1914. 2s. 6d. net. [E. & F. N. Spon, Ltd., 57 Haymarket.]

The Architecture of Ancient Egypt: An Historical Outline. By Edward Bell, M.A., F.S.A. 80. Lond. 1915. 6s. net. [G. Bell & Sons, Ltd., York House, Portugal Street.]

Lincoln Cathedral: Notes on the Architecture of Bishop Grosseteste, from 1235 to 1253. By W. Watkiss, F.R.I.B.A. Pamph. 4s. Lond. 1915. [Lincolnshire Publishing Co., Ltd., St. Benedict's Square.]

Structural Steel. Handbook No. 13 (July 1915). For Engineers, Architects, Merchants, and Steel Users in General. Price 10s. net. Compiled and published by R. A. Skelton & Co., Moorgate Station Chambers, E.C.

Cities in Evolution: An Introduction to the Town Planning Movement and to the Study of Civics. By Patrick Geddes. With 59 illustrations. 80. Lond. 1915. 7s. 6d. net. [Williams and Norgate, 14 Henrietta Street, Covent Garden, W.C.]

The Case for Town Planning: A Practical Manual for the Use of Councillors, Officers, and others engaged in the Preparation of Town Planning Schemes. By Henry R. Aldridge. With an Appendix by Frank M. Elgood, F.R.I.B.A., and Edmund R. Abbott, Solicitor. Sm. 40. Lond. 1915. 15s. net. [National Housing and Town Planning Council, 41 Russell Square, W.C.]

Town Planning. With special reference to the Birmingham Schemes. By George Cadbury, Jun. With illustrations and Map. 2nd impression. 80. Lond. 1915. 7s. 6d. net. [Longmans, Green & Co., 39 Paternoster Row.]

The Practical Design of Steel-Framed Sheds. By Albert S. Spencer. 80. Lond. 1915. 10s. 6d. net. [Constable & Co., Ltd., 10 Orange Street, Leicester Square, W.C.]



9 CONDUIT STREET, LONDON, W., 6th November 1915.

CHRONICLE.

R.I.B.A. Record of Honour: Eighteenth List.

Killed in Action.

HENMAN, CHARLES HENRY ROWED [*Licentiate*], of the Royal Naval Division; son of Mr. Charles Henman [F.]. Killed in action at the Dardanelles on 29th July. Aged thirty-seven.

Mr. C. H. R. Henman served his articles with his father, Mr. Charles Henman [F.], and was afterwards assistant in the same office for two years, and later with Messrs. Henman & Cooper, of Birmingham. He attended the Architectural Association Studio and classes in Classic and English Architecture, Building Construction, etc. Since leaving Birmingham he had been engaged in the Architects' Department of the War Office.

WINGATE, ALEXANDER [*Licentiate*], 2nd Lieut., 9th Highland Light Infantry. Killed in the recent fighting in France.

Lieut. Wingate was educated at Kelvinside Academy. He was articled to the late Mr. Miles S. Gibson, and was afterwards in the offices successively of Sir John Burnet in Glasgow and Professor Beresford Pite in London. He travelled for a year in Italy, Spain, and Portugal, exhibiting the fruits of his tour in a series of water-colour sketches at the Glasgow Institute of Fine Arts. In 1901 he was awarded a medal in the Advanced Class of Design at the Architectural Association. He started in practice alone in 1905, and afterwards entered into partnership with Mr. J. Campbell Reid [F.]. He was a member of the Architectural Association, London, and Associate Member of the Glasgow Institute of Architects.

Died of Wounds.

NEWBERRY, CHARLES JOSEPH [*Student*], Private, 3rd Royal Fusiliers, 3rd Company, 5th Brigade. Died of wounds on 8th May in the Reserve Field Lazzaret 87, Ostniewkerke.

Wounded.

DIRCKS, LAURENCE A. (son of the Librarian R.I.B.A.), Lieut., 18th London Regiment. Wounded for the second time, severely. Now in hospital in England, and progressing favourably.

GODMAN, CHARLES RICHARD BAYLY [*Licentiate*], Major, 4th Royal Sussex. Wounded.

SILCOCK, ARNOLD [A.], 2nd Lieut., 2nd South Staffordshire Regiment (formerly in the Artists' Rifles). Severely wounded at La Bassée on

25th September. Now in hospital at Stoodley Knowle, Torquay, and making good progress.

Military Cross for Conspicuous Gallantry.

CLOUTING, CHARLES EMERSON [A.], Temp. 2nd Lieut., 1st Bn. Buffs (East Kent Regiment). Awarded the Military Cross for conspicuous gallantry on the night of 21st September, 1915, near Forward Cottage, when on patrol duty with Captain Colville, 1st Shropshire L.I.

Capt. Colville was shot within 15 yards of the German sap which they were reconnoitring, and, although 2nd Lieut. Clouting endeavoured to drag him back, he was unable to do so. It was uncertain whether Capt. Colville was still alive, and, after the return of the patrol, a rescue party was led back by 2nd Lieut. Clouting. He found Capt. Colville dead, and, recognising that numbers would be a source of danger, he sent all his party back except Sergt. Baker. These two crawled back under heavy fire, dragging the body with them. There was bright moonlight at the time.

Newly Enlisted in H.M. Forces.

The following is the Eighteenth List of Members, Licentiates and Students who have joined the Army or Navy for the period of the War, the total to date being 45 Fellows, 345 Associates, 180 Licentiates, and 228 Students:—

ASSOCIATES.

Allner, James: 2nd Lieut., Wilts Fortress, R.E.
Anderson, H. Cooper: Army Service Corps.
Ayre, D. W.: 2nd Lieut., Kent Fortress, R.E.
Cubitt, Horace: 2nd Lieut., Kent Fortress, R.E.
Dean, Wm.: 2nd Lieut., Kent Fortress, R.E.
Vey, George: 2nd Lieut., Kent Fortress, R.E.

LICENTIATES.

Abercrombie, B.: 1st/14th Argyll and Sutherland Highlanders.
Eaton, S. E.: O.T.C.
Ferguson, Wm.: 35th Canadian Light Infantry.
Mackenzie, J.: R.N.A.S.
Metson, Geo.: Capt., 19th Bn. London Regt.
Mettham, J. A.: Lieut., R.E.

STUDENTS.

Elston, Jas.: Artists' Rifles.
Evans, H. G.: Royal Engineers.
Ford, Lawton S.: 2nd Lieut., 3rd Bn. Roy. West Surreys.
Gostling, W. B.: 2nd Lieut., 11th Bn. London Regt.
Holyoak, F.: Royal Engineers.
Lee, Stanley: Royal Garrison Artillery.
Smith, V. C. E.: Lieut., 12th Bn. Hampshire Regt.
Stuart, C. L.: 2nd Lieut., 3rd/7th Black Watch.
Voy, A. E.: Royal Engineers.
Watt, J. D.: 2nd Lieut., 2nd East Surreys.

Notes re Members on Service.

LIEUT. W. FLEMING WILKIE [F.], 2/4th Black Watch, has been promoted Captain and posted to 4th Black Watch.

CORPL. J. W. BARROW [A.], King's Own Royal Lancasters, has been gazetted 2nd Lieut., 11th Bn. East Surrey Regiment.

MR. G. L. THORNTON SHARP [A.] (see Fifteenth List) is Lieutenant in the 47th Bn. Canadian Expeditionary Force.

MR. ALAN L. BELCHER [*Licentiate*] (see Seventeenth List) has been gazetted 2nd Lieut. in the 3rd/2nd London Division of the Royal Engineers.

MR. H. L. NORTH [F.], who had been refused enlistment in the Army on at least four occasions, has been accepted as a volunteer ambulance driver, and is now on duty with the British Red Cross Society at the Boulogne Base.

Mr. EDWARD WARREN [F.] is holding the position of Lieutenant Réserve under the Croix Rouge Français at the Hôpital d'Arc-en-Barrois, in the Argonne District.
 Mr. G. C. WINGBOVE [A.] has given up a good practice in Shanghai and is returning to England to join the Army, having been recommended for a commission by the British Minister at Pekin. Has had six years' Volunteer experience.

Architects and Income Tax Assessment.

The following is the letter addressed to the Inland Revenue Office referred to by the President in his Opening Address last Monday:—

30th August 1915.

To the Chairman of the Board of Inland Revenue,—

SIR,—A number of members of the Royal Institute of British Architects have called my attention to the very great difficulty which they will have in paying their Income Tax during the War if it is based on the three years' average system.

A very large number of architects who were making good or moderate incomes before the War have practically earned nothing within the last twelve months and would have been better off if they had closed their offices to save office expenses, yet they will be called upon this year to pay a largely increased Income Tax based upon the amount they were earning before the War.

In the case of men without private means or accumulated savings it will be absolutely impossible to pay on this basis. It is strongly urged by many of them that for the duration of the War the system should be changed and that professional men should only be required to pay on what they have actually earned during the previous twelve months.

I shall be very glad if you can kindly consider the possibility of adopting this suggestion.—I have the honour to be, Sir,

Your obedient Servant,

IAN MACALISTER, *Secretary R.I.B.A.*

The following letter, to which the President of the Institute was one of the signatories, has been addressed from the Institution of Civil Engineers to the Chancellor of the Exchequer:—

17th September 1915.

SIR,—We, the undersigned, desire on behalf of the professional members of the societies over which we preside, to draw your attention very earnestly to the serious position in which a large number of the professional classes and many others who depend upon them for employment, will be placed if the Income Tax should under existing circumstances be assessed upon an average of three years' profits.

All are willing to bear their share of whatever requisitions in the way of Income Tax upon their earnings the Government may find it necessary to impose; but with regard to professional work as distinct from manufacturing and commercial work, we feel that it would not be equitable to assess the earnings this year upon the three years' basis, on account of the extraordinary interference brought about by the war with professional business.

The occupation of the professional members of our societies has been seriously affected, and in many cases has ceased altogether, owing to the war and the restriction of expenditure which the Government have necessarily had to enforce. In anticipation, however, of a future resumption of business, and for the sake of old employees

who are unsuited for other work, many professional men are at considerable loss keeping their offices open, and such employees as are referred to would suffer severely if those offices were closed altogether.

We accordingly venture to request that our representations on this subject may be taken into consideration; and that, in accordance with the principle adopted in the Finance Act, 1914 (Session 2) the incomes of our professional members may for the purpose of the tax be assessed for the current year on the actual profits of the year, as there can be no question that they are seriously diminished by "circumstances attributable directly or indirectly to the present war."

We have the honour to be, Sir, &c., &c.

The Treasury replied:—

11th October 1915.

DEAR SIR,—With further reference to your letter of the 17th ult. in regard to the assessment to Income Tax of professional men, I am desired by the Chancellor of the Exchequer to point out that, prior to the present Budget, the exceptional circumstances of the war had already been recognised by the provisions of Section 13 (1) of the Finance Act, 1914, Session 2, applied to the year 1915-16 by Section 20 of the Finance Act, 1915. These provisions have the effect of bringing the bad year into the average four times instead of three, or in other words, of definitely relieving from charge to Income Tax part of the profits of a better pre-war year.

In the recent Budget it is further proposed that, where the actual income of 1915-16 falls short by more than 10 per cent. of the income on which tax has been paid, additional relief shall be given. The nature of this relief will be apparent from the following extract taken from the Chancellor of the Exchequer's Financial Statement:

Relief is also proposed from the additional Income Tax in certain cases. The whole of the additional duty will be repayable in the event of any individual proving that his actual income from all sources for the year is less by one-fifth than the income on which he has paid taxes. That is a short statement of the change. I will amplify it by saying that it is an endeavour to redress the hardship upon the individual who this year having a very small income, is nevertheless assessed on the average of the three preceding years when he had a very large income, and finds that he is called upon to pay 3s. 6d. in the pound Income Tax in respect of an income which it is true he once enjoyed, but which he now no longer possesses. It is proposed, where his actual income is less by one-fifth, that he shall be relieved of the whole of the 40 per cent. increase, and that where the deficiency does not amount to one-fifth but is more than 10 per cent., repayment of a proportionate part of the additional duty will be allowed.

It will be observed that this proposal is specifically directed to the relief of cases such as those to which reference was made in the letter under reply.

Yours faithfully,

(Sgd.) H. P. HAMILTON.

The President recurs to the subject in the following letter:—

25th October 1915.

To the Rt. Hon. R. McKenna, P.C., M.P.,
Chancellor of the Exchequer.

SIR,—On behalf of the Council of the Royal Institute of British Architects I have to thank you for your letter of 11th October in reply to the joint communication which was sent to you on 17th September by the Presidents

of several professional societies on the subject of the payment of income tax during the war.

My Council fully appreciate the attempts which have been made in the Finance Bill to meet the difficult case of the professional man whose income has greatly diminished as a result of the war. Doubtless the concessions which you describe will materially assist the architect whose income has been halved by the war. But it is submitted that these concessions still fail to meet the case of the architect whose practice has absolutely stopped during the last twelve months. Such cases are painfully frequent, and many of them have already been brought to the notice of my Council. Men who by their skill and industry were earning good incomes two and three years ago now find themselves at the end of their resources and with no prospect of relief until the end of the war, yet they are required to pay a considerable sum in income tax for a period during which they have earned nothing. My Council cannot believe that it is the deliberate policy of the Exchequer that such men should be forced to sell even their furniture and personal possessions and reduce themselves to destitution in order to meet the demands of the income tax.

It is to be remembered that the painful position in which these men find themselves is not an automatic result of the economic conditions arising from the war. It is in many, if not all, cases the result of the direct action of the Government itself. The municipalities have been prohibited or discouraged from continuing or initiating building operations. The Parliamentary War Savings Committee have appealed with authority to the public to stop building houses while the war continues. Doubtless both these measures are called for in the highest interests of the community, but since they automatically produce the greatest distress in the profession which lives by building operations, it is submitted that it is the duty of the Government which has been forced to deprive the architect of his living to take such steps as may be necessary to save him altogether from the demand for a heavy income tax payment in a year during which he has earned nothing and has had the greatest difficulty in keeping his family alive and with a roof over their heads.—I have the honour to be, Sir, your obedient servant.

ERNEST NEWTON, *President R.I.B.A.*

A point requiring rectification in Clause 35 (c) of the Finance Bill now before Parliament is called attention to in the following letter:—

25th October 1915.

To the Rt. Hon. R. McKenna, P.C., M.P.,
Chancellor of the Exchequer.

SIR,—The Council of the Royal Institute of British Architects have had their attention called to an apparent ambiguity in the "Finance Bill, 1915," which might injuriously affect the architectural profession.

It appears that under Clause 35 (c) of the Bill it is intended that members of the skilled professions should be exempted from payment of the excess war profits tax. The Clause specifically exempts: "any profession the profits of which are dependent mainly on the personal qualifications of the person by whom the profession is carried on and in which no capital expenditure is required or only capital expenditure of a comparatively small amount."

These words apply with the utmost precision to the

profession of an architect, who is, therefore, clearly entitled to exemption. The Clause, however, goes on to say: "but including the business of any person taking commissions in respect of any transactions or services rendered, etc."

It is feared that, owing to the fact that architects generally receive their professional fees in the form of a percentage commission on the cost of the buildings they design, the words last quoted may have the effect of depriving them of the exemption granted to them in the earlier words of the Clause.

My Council venture to express the hope that before the Bill is passed you will be able to see your way to make such verbal alterations in this clause as will secure to the architectural profession the benefits of exemption under Clause 35 (c), to which they are as clearly entitled as the members of any other skilled profession.—I have the honour to be, Sir, your obedient servant.

LAN MACALISTER, *Secretary R.I.B.A.*

Architects and National Service.

The attention of members is directed to the letter from the Architects' War Committee printed on page 12, and also to the Form enclosed with this issue of the JOURNAL, which it is requested should be filled up by architects willing to undertake some National Service during the present crisis.

The Committee are authorised to say that Lord Derby quite approves of this appeal by the War Committee to the architectural profession. The returns show that at least 1,800 members of the profession are serving either as officers, non-commissioned officers, or privates. There is evidence that this figure falls far short of the real number, as there is great difficulty in tracing members. According to the census, there are between 7,000 and 10,000 architects in the United Kingdom, and these figures probably include assistants.

The work of architects being of an intellectual character, and architects generally being of the officer class, the War Committee consider it desirable to classify members of the profession, so that those who are suitable should receive commissions, and others who have the technical knowledge useful in various special branches in which their experience and technical training can be applied to assist the country should be advised which to join.

Information about vacancies is difficult to obtain, and frequently reaches the Committee too late for them to do more than make one or two recommendations. From experience gained in filling such vacancies, there is reason to believe that if complete lists properly classified were in hand the Committee would be in a position not only to obtain more and better information, but the waste of men joining the Army from the profession could be to a great extent prevented and the special knowledge possessed by architects could be directed into the proper channel and be used to its full extent. For instance, inquiries can be made in each district of Commanding Officers (to whom to some extent selection of officers is now

delegated) to ascertain what vacancies they have or are likely to have, and to keep them informed of men whose names are on the list and whom the Selection Committee, having interviewed, can recommend. It is found that the information in the National Register, although useful as a general guide, is not sufficient in the case of a profession of such versatile attainments and experience as the architectural, and fuller detail is essential.

The scheme has been working in a small unofficial and tentative way for some time. From the results obtained the Committee are hopeful that if their present appeal meets with a satisfactory response it will be not only the greatest effort that the profession can make in the direction of National War Service, but may be the means of finding suitable military employment for a large number of the profession of military age who have not yet joined the Army.

The Forms are based partly on Army Forms for Appointment of Officers to Temporary Commissions, and Army Forms for Appointment of Officers to Territorial Forces. The information is directed to meet points which the Committee have found are required by applicants or necessary in order to make recommendations for appointment. It is hoped by means of these Forms to assist architects who enlisted early in the War to get promotion, which, for some reason or other, professional men do not get, although the promise was held out to them on joining that suitable men would be promoted from the ranks. Copies of the Forms can be obtained at the Royal Institute of British Architects, the Society of Architects, the Architectural Association and the Allied Societies.

The Opening Meeting.

In accordance with the notice published in the professional Press, the Opening Meeting took place at 3 p.m., instead of 8, on Monday, the 1st. The change was rendered imperative owing to the stringency of the lighting regulations and the expense of complying with them, the whole range of the Institute Galleries being roof-lighted. The change was only definitely decided upon after the official notices for the meeting at the usual hour had been sent out. It is learned with much regret that several members who intended to be present failed to see the corrected notice and had the inconvenience and annoyance of a fruitless journey in the evening.

The meeting was held in the Common Room, the usual meeting-room, together with the East Gallery, being in the occupation of the Civic Survey workers. Among members present were the Past Presidents, Sir Aston Webb, Mr. Leonard Stokes, and Mr. Reginald Blomfield; and among the visitors, Mrs. Newton, Mrs. Stokes, and Mrs. and Miss Blomfield.

Mr. J. J. Shannon's fine portrait of Mr. Blomfield, which was unveiled at the meeting and formally given into the Institute's keeping, is the second in the Collection by this gifted artist, the other being of Sir William Emerson (President 1899-1902).

Sessional Meetings, 1915-16.

It was announced from the chair last Monday that the Council had decided to cancel the programme of papers and to suspend altogether the evening meetings which had been arranged for the new Session. General meetings for the election of members, the transaction of the ordinary business of the Institute, and the discussion of professional questions will be held at 3 o'clock in the afternoon on the dates specified in the *Kalendar* and on the "brown card" shortly to be issued. Until further notice the Library hours will be from ten till six, instead of from ten till eight.

Notices of Meetings, &c.: Discontinuance of Supplements to the Journal.

For the future, notices of meetings, additions to the Library, and all other announcements which it has been the practice to publish in the Supplements will be printed in the JOURNAL, on the last page of text (immediately preceding the advertisement pages). The Supplements will be discontinued. The "Table of Contents" of each issue will also be given on the last page of text instead of on the cover.

The Stricken Universities.

"Oxford is in deepest mourning," says the *Times*. "Every college has lost so many, and so many of its best graduates and undergraduates—the brightest, the most able in mind and body. In round numbers some 540 members of the University have been killed, and 60 are missing up to date.

"But if poor, bereaved, and sad, she is proud in her sorrow. One of the chief Labour leaders in Australia, a State Premier, said publicly the other day that Oxford and Cambridge had done more than their share and sent too many young men, the flower of intellectual England, to fight and die. Oxford does not feel she can send too many."

A recent *Cambridge Review* consists entirely of paragraphs about Cambridge men who have fallen. It is estimated that, of the 10,250 who have come forward, already nearly one in seven is numbered among the killed, the wounded, or the missing. The most brilliant gifts—intellectual, administrative and physical—have been offered freely and without complaint upon the altar of the country. The Vice-Chancellor of the University pays touching tribute to the heroism of the fallen. "Many and diverse were the hopes and expectations we had formed for them," he says, "but every one of these has been surpassed by the event. They have all been found capable of making the greatest denial of self that men can make; they paid away their own life that the life of their fellows might be happy. To put into words the reverence that we owe to the young who have worked and suffered and died for us is beyond my powers; but my heart follows our departed sons with confidence into that state of life into which it has pleased God to call them."

The Nurse Cavell Statue.

Under the Public Statutes Act of 1854 Mr. Lewis Harcourt, as First Commissioner of Works, has given his consent to the erection of the statue to Nurse Cavell on the island site offered by the Westminster City Council, between the National Portrait Gallery and St. Martin's Church, subject to the usual proviso that he is satisfied as to the suitability of the selected design. Sir George Frampton, R.A., who has undertaken to execute the statue "as a labour of love," has expressed the opinion that there could be no better position for the memorial than that so patriotically provided by the Westminster City Council.

Chadwick Public Lectures : Mr. Saxon Snell on Emergency Military Hospital Construction.

The change should be noted in the hour and place of delivery of Mr. Saxon Snell's Chadwick Lecture on "Emergency Military Hospital Construction." The lecture will be delivered in the Rooms of the Royal Society of Medicine, 1 Wimpole Street, W., at 5.15 on Wednesday, 10th November, instead of at the R.I.B.A. Galleries at 8.15 as originally arranged.

Relief for Artists : Decoration of Council Schools.

The Professional Classes War Relief Council has asked that, with a view to finding work for artists in distress through the war, the walls of certain Council schools, to be selected by the Council, may be decorated with friezes and panels, the decorations to remain the property of the Council. It is proposed that the subjects and designs shall be supervised by an expert committee of artists, and submitted for approval to the Council before being carried out. In order that the work of the schools may not be interfered with, the friezes and panels will be executed away from the school buildings, and fixed during the school vacations. The Council will not be put to any expense in the matter. On the recommendation of the Education Committee the London County Council have accepted the offer.

CORRESPONDENCE.

Organisation of Architects for National Service.

*Architects' War Committee,
R.I.B.A., 9 Conduit Street, W. :
4th Nov. 1915.*

To the Editor, JOURNAL R.I.B.A.,—

SIR,—The Architects' War Committee, which was founded at the outbreak of the War with the object (amongst others) of offering to the Government the expert services of the Architectural Profession throughout the country, has been profoundly impressed by the letter of His Majesty to the people, and the utterances of the Prime Minister, Lord Kitchener, and the Minister of Munitions upon the need for increased War Service by men of all classes.

The Committee has had under consideration for some time the means whereby the Profession may still further assist in meeting the needs of the present crisis by a more complete organisation in harmony with the developments which have taken place during the past year.

The Committee feels that the present time, while Lord Derby's great effort in Voluntary recruiting is before the country, is an opportune moment for initiating such an organised movement. It is believed that when the time comes for analysing statistics, Architects will be found to have ranked well with other professional men in the extent of their response to the country's call. There must, however, still be many who are able to help and who now appreciate the greater need for War Service, and among them a number who are not coming forward through lack of knowledge of the direction in which their special attainments can best be utilised.

The War Committee, therefore, proposes through the courtesy of your columns and through its sub-committees and the various Architectural Societies throughout the country, to bring to the notice of all Architects the fact that it welcomes particulars from all those willing to offer War Service.

Forms upon which the required information is to be furnished can now be obtained on application to the Central Committee, at 9 Conduit Street, London, W., or to any of the Architectural Societies throughout the country.—We are, Sir,

Yours faithfully,

- ERNEST NEWTON, A.R.A.,
Chairman of the Architects' War Committee; President
of the Royal Institute of British Architects ;
REGINALD BLOMFIELD, R.A., F.R.I.B.A.,
Past President R.I.B.A.
ERNEST GEORGE, A.R.A., F.R.I.B.A.,
Past President R.I.B.A.
ASTON WEBB, R.A., F.R.I.B.A.,
Past President R.I.B.A.
H. AUSTEN HALL, F.R.I.B.A.,
President of the Architectural Association.
E. C. P. MONSON, F.R.I.B.A.,
President of the Society of Architects.
GRAHAM C. AWDREY, F.R.I.B.A.,
President of the Bristol Society of Architects.
R. BURNS DICK, F.R.I.B.A.,
President of the Northern Architectural Association.
HARRY GILL, Licentiate R.I.B.A.,
President Notts and Derby Architectural Society.
J. ALFRED GOTCH, F.R.I.B.A.,
Vice-President R.I.B.A. ; Past President A.A. ; President
of the Northamptonshire Association of Architects.
E. P. HIND, A.R.I.B.A.,
President of the Liverpool Architectural Society.
CHARLES KEMPSON, F.R.I.B.A.,
President of the Leicester and Leicestershire Society of
Architects.
A. H. L. MACKINNON, A.R.I.B.A.,
President of the Aberdeen Society of Architects.
T. FORBES MACLENNAN, A.R.I.B.A.,
President of the Edinburgh Architectural Association.
G. SALWAY NICOL, A.R.I.B.A.,
President of the Birmingham Architectural Association.
R. CAULFIELD ORPEN,
President of the Royal Institute of the Architects of
Ireland.

ADAM F. WATSON, F.R.I.B.A.,
President of the Sheffield, South Yorkshire and District
Architectural Society.

JOHN WATSON, F.R.I.B.A.,
President of the Glasgow Institute of Architects.

WALTER CAVE, F.R.I.B.A.,
Past President A.A.

E. GUY DAWBER, F.R.I.B.A.,
Past President A.A.; Hon. Secretary R.I.B.A.

H. L. FLORENCE, F.R.I.B.A.,
Past President A.A.

HENRY T. HARE, F.R.I.B.A.,
Past President A.A.

GERALD C. HORSLEY, F.R.I.B.A.,
Past President A.A.

J. ARCHIBALD LUCAS, F.R.I.B.A.,
Past President, Devon and Exeter Architectural Society.

GLENDINNING MOXHAM, F.R.I.B.A.,
Past President of the South Wales Institute of Architects.

ALEXANDER N. PATERSON, F.R.I.B.A.,
Past President of the Glasgow Institute of Architects.

JOHN SLATER, F.R.I.B.A.,
Past President A.A.

ERNEST R. E. SUTTON, F.R.I.B.A.,
Past President of the Nottingham and Derby Archi-
tectural Society.

PERCY B. TUBBS, F.R.I.B.A.,
Past President, Society of Architects.

MAURICE E. WEBB,
Past President A.A.

G. P. K. YOUNG, F.R.I.B.A.,
Past President of the Dundee Institute of Architects.

HERBERT BAKER, F.R.I.B.A.,
WALTER BRIERLEY, F.R.I.B.A.,
JOHN BURNET, R.S.A., F.R.I.B.A.,
Vice-President R.I.B.A.

C. MCARTHUR BUTLER,
Secretary of the Society of Architects.

BASIL CHAMFNEYS.

H. CHATFIELD CLARKE, F.R.I.B.A.

T. EDWIN COOPER, F.R.I.B.A.

MAX CLARKE, F.R.I.B.A.

ALFRED W. S. CROSS, F.R.I.B.A.,
Past Vice-President R.I.B.A.

PERCIVALL CURREY, F.R.I.B.A.,
Hon. Secretary, Architects' Benevolent Society.

G. LEONARD ELKINGTON, A.R.I.B.A.

H. M. FLETCHER, F.R.I.B.A.,
Hon. Secretary A.A.

WALTER S. A. GORDON, Licentiate R.I.B.A.

L. ROME GUTHRIE, A.R.I.B.A.

E. VINCENT HARRIS, F.R.I.B.A.

GEORGE HUBBARD, F.R.I.B.A.,
Past Vice-President R.I.B.A.

THOMAS JACKSON, R.A.

A. R. JEMMETT, F.R.I.B.A.

RALPH KNOTT.

F. S. LESLIE, COL., R.E., M.S.A.

ROBERT LORIMER, A.R.S.A., F.R.I.B.A.

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Hon. Secretary of the Architects' War Committee.

OBITUARY.

The late Alexander Wingate.

The profession of architecture is paying due toll to the War God, and the death in action of Alexander Wingate, 2nd Lieut., 9th H.L.I. [Licentiate] brings to a noble if premature end a career of great promise. His work as a student, his charming sketches and measured drawings, executed during many months of itinerant travel in Italy, France, and elsewhere were indicative of his personality. In the practice of his art he remained a student, his ideals always within vision. Thorough in everything he undertook, nothing was too unimportant for study. An intense modesty in Wingate's nature effectively hid, even from intimate friends, his large-hearted generosity to those less fortunate than himself. To work in association with him was an inspiration and a privilege. His high sense of duty took him to Flanders in the early days of the war, and his death was worthy of his profession and of himself.

J. CAMPBELL REID [F.]

Alexander Wingate came to my office from Mr. Burnet's in the autumn of 1899 and worked with me for four years, departing for a year's continental travel, of which he accomplished a not inconsiderable portion on foot. He was—as others trained in Mr. Burnet's—a singularly clear and able draughtsman, accurate, matter-of-fact, complete, and consequently artistic. A corresponding habit of speech, dry and certain, without polishing or ornaments, but lit up, somewhere or other, with humour, reflected his handiwork in his manner. He was so reticent and modest that I saw but few of his sketches and he quite refused to show any of his designs.

After his return from abroad I lost sight of him, as he set up in practice at Glasgow, I think in 1905, and nearly ten years passed before we met or communicated. Last Easter Day he wrote me a long and interesting letter from the front in France, and to my great delight I had an entirely unexpected visit from him shortly after at the School of Building at Brixton, where he, with the assistance of a taxicab, unearthed me late in the evening. He was on his way back from a week in Scotland and leaving next morning for France. He had just the same warm heart and dryness of speech, but seemed more "Scotch" than ever, looking the picture of a weather-beaten modern Highland warrior. He had been out since November in all the scraps in front of Bethune, Givenchy, etc. He showed me a fascinating sketch-book of plans of trench works surrounding different positions, accurately sketched with coloured pencil definitions, done for his own instruction and "amusement" and full of interest and enlightenment.

He had for years worked as a Territorial and left England as a non-commissioned officer, receiving a commission in his regiment, the Glasgow Highland Light Infantry, at Christmas. I heard of his death from his old friend Theodore Fyfe; it happened early last month in the fighting following the recent advance. The loss of those reticent but reliable friends who do not bother one, but are still true and of whose certainty to undertake to the utmost of their ability anything they take up, makes life poorer and weaker. But contact with strong and simple characters has an infective power which leaves us also certain that they are not spent in vain or pass away without leaving influences which are still alive.

BERESFORD PITE [F.].

The late Wm. Galsworthy Davie.

On the 26th inst. passed away at Furze Platt, Maidenhead, Wm. Galsworthy Davie, in his seventy-fifth year. A Devon man, he began his architectural career in the office of Mr. Lauder, of Barnstaple, at a time when the Gothic Revival was at its height; and whilst there, in response to an advertisement, he applied for and procured a situation as assistant to Wm. Butterfield, in Adam Street, Adelphi, where he stayed for several years, becoming Mr. Butterfield's right-hand man, and receiving from him an offer of a partnership, which, however, never matured. In 1871 Davie competed for and won the Royal Academy Gold Medal for the best design for a College, with a travelling studentship, and the same year the Soane Medallion of the Royal Institute of British Architects for a design for Royal Stables and Residence for the Master of Horse, combined also with a travelling studentship. France was chosen as the ground for study, where some months were spent sketching and measuring mainly Early Gothic architecture. The result of this tour, made during the years 1874-5, was the publication by B. T. Batsford, in 1877, of *Architectural Studies in France* by W. Galsworthy Davie, a large folio volume containing, besides many measured drawings of Early French Gothic details to a large scale, a number of plates in colour of floor tiles, stained glass, decoration and ecclesiastical metal-work, principally from Auxerre Cathedral. This work is dedicated to Wm. Butterfield, and is interesting as showing by the subjects selected the somewhat narrow outlook of a student of that time working in what may be regarded as an important Gothic office. The drawings are bold and good, and, like all the work undertaken by the subject of this note, strictly conscientious. The author acknowledges the assistance he received from his friend John Capon, who accompanied him during part of his tour, when making the original drawings and sketches. After leaving Butterfield's Davie commenced to practise. A public fountain, executed at Chippenham, was won in competition, and he erected some houses at Brighton, but his health failing he retired into Buckinghamshire for some years. W. G.

Davie's name is best known by a series of books published by B. T. Batsford. The first of these, brought out in 1900, illustrated Cottages and Farm Houses in Kent and Sussex by photographs selected and taken by him, and with descriptive notes and sketches by Mr. E. Guy Dawber. This was followed in 1903 by *Old English Doorways*, with notes by Mr. Henry Tanner, jun., and succeeded by *Old Cottages and Farm Houses in the Cotswold District* in 1905, in which Mr. Dawber again collaborated, and another volume on Surrey by Mr. Curtis Green, with plates from photographs by Davie. These books have been valuable in calling attention to the beauty of what remains of our native style of building in various localities with the local materials. The buildings illustrated are generally of modest dimensions, and show a traditional progress less affected by foreign influence than is the case with buildings of greater importance. Davie was an expert photographer, and his architectural training assisted in presenting his subjects from the best point of view, as also in their selection. Many of the large plates in *Tudor Architecture* by Messrs. Garner & Stratton were taken by him, as also the greater part of those illustrating the writer's book on *The English Fireplace*, both published by Mr. Batsford. L. A. SHUFFREY.

The late George Bertram Bulmer [F.]: Bequest to the Architects' Benevolent Society.

My partner, G. Bertram Bulmer, who has been associated with me since 1877, died on Tuesday, 19th October, at the age of 64 years after a protracted illness. Upon the death of his two sisters (who have a life interest), the sum of £3,000 is bequeathed by his will to the Architects' Benevolent Society. He leaves a widow. He was a member of the Leeds and West Riding Architectural Society and of the Leeds Arts Club and Yorkshire Union of Artists.

Mr. Bulmer was born on the 26th June, 1851, at Assembly Court, Leeds, now demolished, and upon the site of which stands the Corn Exchange (erected by the late Cuthbert Brodrick, architect). He was the son of the late Mr. George Bulmer, surgeon, was educated at the Leeds Grammar School, and articled to the writer's father, the late Wm. Perkin [F.], who commenced practice in 1832. He attended the Leeds School of Art classes and developed a very keen knowledge of form and colour, which he afterwards applied in his works. Upon the termination of his articles he joined the staff of the busy office of the late George Corson, with whom he remained some time and during which period many important competitions were won. After managing a large office in Leicester, he joined the writer in partnership. During Queen Victoria's Jubilee year he published a book, *Architectural Sketches in Yorkshire*, in commemoration, a copy of which Her Majesty was graciously pleased to accept. He was the author also of an essay on Brewery Construction, for which he was awarded a medal, and of Papers on Wakefield Town Hall and on

House Sanitation. He was an inveterate sketcher and painter of animals, especially dogs. A special hobby was breeding fox terriers and fancy pigeons. He was possessed of a rare fund of humour, and gave play to it by writing comic verse illustrated by sketches. He was always a devoted student of architecture, making a point of measuring and sketching good examples of old work.

The following are some of the more important works carried out by the firm, in some cases conjointly, in others separately. Many are erected in re-inforced concrete, with Carrara or Marmo facings.

Won in Competition.—Town Hall, Pontefract; Police Buildings and Courts, South Shields; Yorkshire Penny Bank, Halifax; Yorkshire Penny Bank and Albany Hotel, Sheffield; Third Premium, Barrow-in-Furness Town Hall; First Premium, Over Darwen Town Hall (in collaboration with the late Charles Bell); First Premium, Leeds and County Conservative Club (the award of the referee was upset and we were placed third, so the premium was declined and returned); First Premium, Halifax Joint Stock Bank; Third Premium, Harrogate Conservative Club.

Buildings in Leeds.—Head Office of Yorkshire Penny Bank, Leeds, carried out at cost of £60,000 (all full-size details of mouldings, ornament, carving, and fittings drawn by Mr. Bulmer); National Provincial Bank; Union of London and Smiths Bank; United Counties Bank; Scottish Union and National Insurance Offices; City Chambers; London and Lancashire Fire Offices; Refuge Assurance Co.; Employers' Liability Corporation; Lyon's Café, Bond Street; Atlas Chambers; Extension of Sun Insurance Offices; West Bar Chambers; Cabinet Chambers; Leeds Forge Co. Offices; Royal Exchange Offices; Interior alterations, S. Barnabas; Mission Room and Schools, All Soul's; Extensive alterations, Royal Exchange, Town Hall, Messrs. Holt's Warehouses and Offices, and Messrs. Sharp & Co.'s Warehouses and Offices; Buck Hotel; Memorial Cross.

Other Buildings.—Church of St. Cuthbert, Hunslet; St. Cuthbert Parochial Hall and Schools, Hunslet; Tower, Whitwood Mere Church and Mission Room; Mission Room, Kirkstall; Screen Chancel, Saxilby Church, Lincolnshire; Restoration, Cloacnag Church, N. Wales; Chancel Panelling, Sleight's Church; Clark Memorial Obelisk, Burley in Wharfedale; Extension of Carleton Lodge, Pontefract; Chapel and Board Room Fittings, Chester Union; Lodge, Coniston Park; First Extension of Cairn Hydro, Harrogate; Schools, Barby; Post Office, Burnhall; Black Swan Hotel, Harrogate; Constitutional Club, Burley-in-Wharfedale; Drill Hall, Burley-in-Wharfedale; Mineral Water Works, Harrogate; National Provincial Bank, Whitby; Silk Mill, Bill Busk; Reredos, Westerdale Church; Lodge, Cookridge; Lych Gates, Rothwell and Burley-in-Wharfedale; Hartstead Works Extensions; Billiard and Drawing-room Wing, Hillfield Peel; Extensions Thorlby House, Skipton; Vicarage, Altofts; Rectory, Whitwood Mere; Chapel Enclosure Church, Skipton; Lodge, Skipton Court, and numerous residences and country houses.

Mr. Bulmer and I had worked together in perfect harmony during the long period of our association, and I deeply deplore his loss.

H. PERKIN [F.].

Graham Nicholas, of Lymington [*Fellow*, elected 1906], died on the 12th September, at the age of forty-four. He served his articles with Mr. F. A. Tugwell, of Scarborough, and on their completion came to London and worked in various offices, including those of the London School Board and Mr. Mervyn Macartney. He started practice in 1895 at 2, South Square, Gray's Inn. In 1899 he entered into a partnership in Halifax, and was responsible for many important buildings in the town and neighbourhood.

Among his works are The Croft, Halifax (residence); Vicarage, Lightcliffe; Woodstock Shelf, Bradford (residence); Longlands, Lightcliffe (residence); Hipperholme Grammar School, Mill Thorns Board School and All Saints' Church School, Halifax; King Cross Club, Halifax; Institute, Warley; Golf Club, Ogden; St. Michael's Mission Church, Halifax; St. John's Church, Ingrow (decoration); St. George's, Barnsley (decoration); St. Stephen's, Barnsley (addition and decoration); the Commercial Bank, Hull; various works in Leeds, Bradford, Harrogate, Keighley, Scarborough, etc.

Philip Arthur Cawte Wilkinson [*Licentiate*], of Craven House, Kingsway, died as the result of an accident on the 20th September, aged fifty-two. He was the third son of the late Philip Wilkinson [F.], of Grenville Place, N.W., and served his articles with Mr. J. T. Wimperia. In 1889 he entered his father's office as assistant, and was afterwards taken into partnership. On his father's retirement in 1904 he carried on the practice on his own account. His practice was chiefly domestic work and surveying.

The late William Henry Lynn [p. 506].—At a meeting of the Council of the Royal Institute of the Architects of Ireland, held on 4th October, the following resolution was passed: "The Council of this Institute desires to place on record its sense of the great loss the Institute and the profession of architecture generally has sustained in the death of Mr. W. H. Lynn, President of the Institute in the years 1886-87-88. Mr. Lynn, during a long life devoted to the practice of the profession of his adoption, designed many important public and domestic buildings, which both in Ireland and in England testify to his masterly qualifications."

MINUTES. I.

At the First General Meeting of the Session 1915-16, held Monday, 1st November, 1915, at 3 p.m.—Present: Mr. Ernest Newton, A.R.A., *President*, in the Chair; 23 Fellows (including 8 members of the Council), 10 Associates, 3 *Licentiates*, 1 Hon. Associate, and several visitors—the Minutes of the Special General Meeting held 5th July 1915, having been published in the JOURNAL, were taken as read and signed as correct.

The Hon. Secretary (Mr. E. Guy Dawber) announced that the losses by death since the last meeting numbered 21 members, including 4 Fellows, 5 Associates, 8 *Licentiates* and 4 Students. Nine of these were young men who had come forward at the call of duty to fight in defence of their country and had perished on the battle-field. Their names were:—

Lance-Corporal Alexander Wingate, *Licentiate* (9th Battalion, Highland Light Infantry).

Captain George Pigram Bowie, *Licentiate* (5th Battalion, First Canadian Contingent).

Charles Henry Rowed Henman, *Licentiate* (Royal Naval Division) (a son of Mr. Charles Henman [F.]).

Henry Charles Pullin, *Licentiate* (Rifle Brigade).

Sub-Lieut. Aldersey Dicken, *Licentiate* (Royal Naval Volunteer Reserve).

Private Charles Joseph Newbery, *Student* (3rd Royal Fusiliers).

2nd Lieut. James Bernard Millard Walch, *Student* (2nd Queen's Royal West Surrey Regiment).

Edmund George Dawson Fromant, *Student*.

Captain Frederic Henry Lawson, *Student* (5th Battalion, Northumberland Fusiliers).

On the motion of the Hon. Secretary it was Resolved, That there be recorded on the Minutes of the Meeting an expression of the Institute's deepest sorrow at the loss of these gallant young lives, and that a message of sympathy and condolence be conveyed on behalf of the Institute to their bereaved relatives.

The Hon. Secretary also announced the decease of George Bell, *Fellow*, a Past President of the Glasgow Institute of Architects and a former member of the R.I.B.A. Council, and of George Bertram Bulmer, *Fellow*, Past President of the Leeds and Yorkshire Architectural Society, who also served for a time on the R.I.B.A. Council.

The Hon. Secretary stated that intimation had been received at the Institute that under the will of Mr. Bertram Bulmer, the Architects' Benevolent Society, on the expiration of certain life interests, would benefit to the extent of £3,000.

On the motion of the Hon. Secretary it was **RESOLVED**, That the sincere condolences of members be offered to the near relatives of their late respected colleagues Mr. George Bell and Mr. Bertram Bulmer.

The Hon. Secretary further announced the decease of :—

George Henry Hunt, *Fellow*, elected 1891.

Graham Nicholas, *Fellow* 1906.

George Lister Sutcliffe, *Associate* 1891, *Fellow* 1911.

Henry David Davis, *Associate* 1872, *Fellow* 1879, *Retired Fellow* 1903.

Edwin Richard Hewitt, *Associate* 1881.

Alfred Lightly MacGibbon, *Associate* 1901.

John Myrtle Smith, *Associate* 1907.

William Henry Gibson, *Licentiate*.

Henry Bedford Tylor, *Licentiate*.

Philip Arthur Cawte Wilkinson, *Licentiate*.

The Secretary announced that the following candidates, being found eligible under the Charter and By-laws, had been nominated for election: As **FELLOWS** (11): John Gordon Allen [A. 1910]; James Westbrook Farmer [A. 1908]; Buenos Aires; Edgar Quiggin [A. 1905]; Liverpool; Philip Appleby Robson [A. 1897]; together with the following **Licentiates**, who have passed the Examination qualifying for candidature as **Fellows**: Alfred Barham Black, Adelaide; James Edwin Forbes; George Donaldson Macniven, Edinburgh; Charles Bulman Pearson, Lancaster; John Duncan Tate; Charles Clayton Thompson, Derby; George Wittet, J.P., Bombay. As **ASSOCIATES** (23): Percy Joyce Adams [S. 1911]; Harry Andrew [S. 1912]; Hull; Pherozshah Fardoonji Balsara [Special], Bombay; James Bennett [S. 1914]; Glasgow; Reginald Bruce, P.A.S.I. [Special]; Edgar Gooding Catchpole [S. 1908]; Ipswich; Alexander MacLauchlan Duncan [Special], Glasgow; Eric Carwardine Francis [S. 1911]; John Henry Horniman [S. 1909]; Sidney Harold Loweth [S. 1913]; Cyril Hawthorn Mitchell [S. 1914]; Ernest Paul Brander Musman, B.A. Lond. [S. 1912]; Charles Edwin Nichols [S. 1911]; Sheffield; Charles Lanoashire Pace [S. 1907]; Thomas Reive [S. 1908]; Manchester; Manning Durdin Robertson [S. 1911]; Alfred Douglas Robinson [S. 1909]; Harvey Robert Sayer [S. 1905]; Southampton; Albert Isaac Turner [S. 1909]; Harold Frederick Walker [S. 1913]; Enoch Williams [S. 1908]; Cardiff; Reginald Sharman Wilshire [S. 1912]; William Cecil Young [S. 1910]; Manchester.

The President delivered the Opening Address of the Session. The President unveiled and formally presented to the Institute on behalf of the subscribers the portrait of Mr. Reginald Blomfield, R.A., *Past President*, painted by Mr. J. J. Shannon, R.A.

Mr. Reginald Blomfield, after a brief reference to the portrait, moved a vote of thanks to the President for his Address, and the motion having been seconded by Mr. J. A. Gotch, F.S.A., *Vice-President*, the vote was carried by acclamation and briefly responded to.

The President announced that the Council had decided, owing to the exigencies of the lighting regulations, to cancel the programme of Papers and to suspend the evening meetings which had been arranged for the Session; that the usual Business Meetings would be held, but would take place at 3 o'clock in the afternoon; that it had also been decided to close the Library at 6 o'clock in the evening instead of 8, and that it might be necessary as the winter advanced to close at a still earlier hour.

The proceedings then closed and the meeting separated at 3.55 p.m.

THE EXAMINATIONS.

The Final: Problems in Design.

The Galleries of the R.I.B.A. not being available for exhibitions in consequence of their being devoted to the work of the Civic Survey of Greater London, the Council of the Architectural Association has kindly offered accommodation for the bi-monthly exhibitions of the problems in design. The exhibitions will be held on the following dates at 18 Tufton Street, Westminster; November 8 to 13; January 10 to 15, 1916; March 6 to 11; May 8 to 13; July 10 to 15.

NOTICES.

THE SECOND GENERAL MEETING (BUSINESS) of the Session 1915-16 will be held Monday, 29th November 1915, when the Chair will be taken at THREE O'CLOCK P.M. precisely, for the following purposes:—

To read the Minutes of the General Meeting (Ordinary) held Monday, 1st November; formally to admit members attending for the first time since their election, &c.

To proceed with the election of the candidates nominated for membership at the Meeting of the 1st November.

Chairman to move that the Regulations for Architectural Competitions [KALENDAR, p. 476] be altered as follows:—

1. The second paragraph to read:—"Members of the Royal Institute of British Architects and of its Allied Societies are only permitted to take part in Competitions in accordance with these Regulations, which are intended to apply to all Competitions other than private Competitions instituted by private individuals or firms."

2. The footnote at the bottom of the first page to be omitted.

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TO LET, AS OFFICE, a good room facing garden, Gray's Inn. Address, "F.R.I.B.A.," 9 Conduit Street, W.



ARCHITECTS AND TOWN DEVELOPMENT.

THE Town Planning Committee of the Royal Institute of British Architects desires to direct the earnest attention of the Architectural Profession to the urgent want of artistic guidance in the preparation of Town Planning and Improvement Schemes. The following statement is therefore issued for the use of Architects, and especially for the Town Planning Committees of the Royal Institute.

I.—THE NEED FOR ARCHITECTURAL ADVICE.

The subject of Town Development is an enlargement of the art of Architecture as ordinarily understood, and Architects are urged to point out, whenever necessary and possible, that it is the predominant aspect of the art of building in and about towns, and therefore should be specially studied.

The development of towns by extension and improvement is a movement in which Architects at present are only taking a small part. The Housing and Town Planning Act of 1909, though it touches but a portion of the subject of Development and Improvement, is important to architectural art as it places under regulation the spasmodic, and hitherto only partly regulated, growth of towns.

By the side of the economic and sociological aspects of the question of Town Development, to which definite study and experiment is giving the character of an applied science, are Engineering, Sanitation, Roadmaking, Tramways, Lighting, Cleansing and Sewerage; these and other operations of municipalities are always placed in the hands of competent engineers and especially trained permanent officials.

The contribution which Architecture makes to the amenity of a town is not less in importance than that of Engineering. Towns without such amenity depress existence, whilst orderliness and beauty not only make civil life more endurable but add to economic success. But towns hitherto have developed without recognition of their inevitable connection with Architecture and in indifference to the evidence which handsomely laid-out cities and suburbs offer of the scope and advantage of the art of Town Planning.

The subject is worthy of the serious attention of Architects, and as at present it has great public urgency owing to the promotion of Town Planning and Improvement Schemes without previous

artistic consideration, it is very desirable that the assistance of Architects should be enlisted in their preparation, either as members of public bodies or artistic societies, or in their professional capacity as expert advisers.

It is manifest that considerations of architectural and artistic interest are created by and involved in the planning of roads and streets. The same balancing of practical and utilitarian necessities with artistic and monumental ideals, which the Architect exercises in the design of a public building, is involved in the successful planning of the roads and sites of a town. No body of professional men are so well qualified as are Architects to watch over and promote those artistic elements which make for complete success and amenity, and no advisers have more right to be heard in the public interest.

The principles that secure architectural success in a scheme are fundamental and not supplementary; they affect in the greatest degree the originating lines with which the planning of streets and spaces commences; if they are ignored the mistakes made at the outset are beyond rectification, and no magnificence in the character of the buildings erected afterwards will compensate for initial blunders in the position or shape of the sites.

All Town Plans consist primarily of two factors, Thoroughfares and Sites, and both contain the initial elements of complete architectural success. Practising Architects will accordingly value the opportunity afforded in the preparation of a Town Plan for securing well-formed building-plots and spacious roads.

The advice of the Architect is therefore essential not only at the later stages but from the very commencement; his suggestions for the revision of the preliminary draft will be more useful and economical than criticisms or small amendments made after the main lines of the plan have been wrongly laid down.

II.—PROCEDURE.

Renewed attention is invited to four Papers prepared by the Town Planning Committee R.I.B.A.—namely:

No. I.—Suggestions to Promoters of Town Planning Schemes.

No. II.—Notes of Procedure and Opportunities afforded for the R.I.B.A., the Allied Societies, and other Architects interested in Town Planning Schemes.

No. III.—Suggestions for securing the Co-operation of the R.I.B.A. and the Allied Societies in dealing with Town Planning Schemes.

No. IV.—Suggestions for Action on Procedure under a Scheme by the Representatives of Architectural Societies.

These Papers were prepared as practical suggestions for useful action by the R.I.B.A. and its Allied Societies, and copies can be obtained from The Secretary R.I.B.A., 9 Conduit Street, W.

When it has been decided to put the Town Planning Act in operation the opportunities for useful action which exist under the Act in the Statutory Public Meetings and Inquiries should be taken advantage of. Good suggestions that have proved unwelcome to promoters can be repeated to the Local Government Board Inspector. This official acts only upon matter publicly laid before him and does not initiate or add improvements to schemes, though he can welcome, make conditional, or give effect to, proposals for the correction of a scheme and insist upon the consideration of architectural reasons to which the promoters have not listened. As the opportunities have been created under the Act in order that architectural and other bodies interested in the amenity of the proposed scheme may be heard, the importance of utilising them must be fully emphasised.

Upon the promotion of Private Bills for Municipal or County Improvements, as well as for railway or other works affecting the amenity of a town, action can be taken by petition and evidence before a Parliamentary Committee. The power and freedom possessed in such matters by Parliament are

unlimited, and surprise has sometimes been expressed by statesmen that so little use is made by those interested in Architecture in attempting to restrain by means of evidence before Parliament the proposals of Railway or other Companies for erecting unsightly bridges and works. The absence of organised opinion has permitted many irretrievable mischiefs to be perpetrated which could have been dealt with and prevented by any organisation that watched Town Planning or Improvement proposals in the interests of Architecture.

III.—SOME ARCHITECTURAL POINTS.

The points to which Architects will direct study and public attention vary with the special characteristics of towns.

Generally, the natural physical conditions of the site, the surroundings, hills, and broken levels, water frontages or winding rivers, with the requirements of bridges, quays, and other factors, dominate the district in which a town lies. London on the greatest scale, and Edinburgh, Dublin, and Cardiff on a smaller, illustrate the effect of the features which underlie every Town Plan.

No proposals for suburbs external to a town (and Town Planning Schemes generally are of this nature) should be considered apart from the relation of new roads to the thoroughfares of the internal town which they extend. This consideration is not usually a primary one with promoters of building estates but is always of great ultimate importance to the community.

Possible internal improvements which may not come within the scope of a Town Planning Scheme should be contemplated in connection with external development. The help of public opinion will be required to effect, through the municipality, an internal street improvement corresponding to private development on the outskirts, as it is not likely that Parliament would refuse consent to a promising Town Planning Scheme because of backwardness in promoting municipal improvements.

Architects will be fully conscious of the artistic possibilities presented by the use of important buildings as town landmarks. A practical use is thus often associated with an artistic monument. The important buildings or ancient monuments of a town constitute the greater part of its individuality both to citizen and stranger, and not only need preservation and respect but emphasis and union with any scheme for town extension, so that the suburb should not be radically disconnected from the centre features.

The approach by high road or from a railway station to a central place or park always offers material for architectural treatment, though often left to the mercy which waits on accidents. Special attention should be directed to railways, which, if entering a town at a high level, defy all efforts at subordination. Embankments, archways, and viaducts need not be helplessly abandoned to fate; if taken in time, either when the railway is first promoted or when powers are sought for enlargements, local, artistic and architectural interests can obtain a hearing and secure modifications and concessions.

The following suggestions relate to points more or less obvious but liable to be overlooked at the proper or earliest stage of the preparation of a Town Development plan. They are instanced as matters to which Architects should give special attention, but the list is not conclusive, and many other considerations will present themselves, according to local circumstances.

In the preparation of a plan for a large or small area, after considering the relation of the approaches to the town and district, some of the following points will demand the counsel of Architects:—

1. The arrangement of centres suitable for the grouping of public buildings and gardens.
2. The positions for residences of varying importance, with increased spaciousness around the smaller dwellings.
3. Combined gardens or play and drying grounds, and cultivation gardens or allotments. The desirability of allocating steep escarpments as open spaces.

4. Separate commercial and shopping streets and factory areas.
5. The width and arrangement of streets for different purposes, and the important subject of tree-planting.
6. Main avenues based on outlook and view-points, including any old buildings or valuable trees on the site.
7. The fixing of lines of frontage to avoid monotony in some roads and to give regularity to others.
8. The determination of the depths of sites and the useful appropriation of back-land.
9. The planning of angles of intersection to avoid traffic dangers and ugliness or awkwardness in effect.

IV.—RELAXATION OF BYE-LAWS. ELEVATIONS.

An opportunity is provided in preparing a scheme under the Town Planning Act for obtaining improvements which would be contrary to existing Bye-laws.

The relaxation and alteration of restrictions as to the widths of roads, methods of building, and other matters may be applied for, approved, and embodied in the Final Scheme. As Architects are often hampered by inappropriate Bye-laws, their especial attention should be given to this matter.

Architectural advice will specially be needed in laying down building conditions as to elevations and heights, which are scarcely of less importance than the arrangement of the land. The imposition of architectural tests, though a difficult matter, is one that has at least to be watched on both artistic and professional grounds. It is clear that the architecture of the unit extends to the street and to the town, and mutual agreement should be sought in order to secure harmony in treatment where it is manifestly desirable. The importance of creating local sentiment in favour of proper architectural expression in the principal thoroughfares and on central sites will appeal to the architectural profession.

V.—ARCHITECTS AS LEADERS.

Architects will not as a rule find themselves alone in promoting a demand for due consideration of the artistic interests of their own towns. The initiative is properly with them by virtue of their professional training and outlook, and to their foresight and public spirit is committed the guardianship of the architectural possibilities inherent in any proposed scheme. Their leadership should stimulate the public spirit of those who in every community value the elevating influences of natural and architectural beauty.

Such disinterested public action has especial value when brought to bear upon municipal bodies. The presence of Architects is necessary upon Corporations, especially upon committees charged with public improvements, works, and Town Planning Schemes, where their expert advice is a proper ingredient in the constitution of voluntary representative committees. The sacrifice of time and labour involved must be incurred in the interest of the artistic amenity of our towns, too often sadly neglected.

The formation of local voluntary committees or societies of persons specially interested in Architecture and Art to promote public improvements may lead to great results if the opportunities afforded by a Town Planning Scheme are taken. The Allied Societies of the Royal Institute of British Architects may be urged to co-opt upon their Town Planning Committees all who have connection with or interest in local amenity.

For instance, the large landowners and their agents often take an enlightened interest in this subject and can exercise influence in directing attention to the importance of obtaining advice from an expert Architect, with a view to his acting in conjunction with the local authorities in the preparation of a scheme.

Other useful members of a Town Planning Committee would be those interested in the acquisition and preservation of ancient monuments, public open spaces, and other local activities, also those in charge of Art Galleries, Libraries, and similar institutions. Thus will be grouped together the considerable forces interested in public amenity for consultation and action.

In towns out of touch with the activities of any Allied Society, Members of the Royal Institute of British Architects should write to the Secretary of the Institute, who will place them in communication with the Town Planning Committee of the Institute or of the most accessible provincial centre.

Lectures on subjects illustrating Town Development and Architecture should be promoted as they lend themselves to popular and interesting illustration and appeal to all sections of the community.

COMPETITIONS.

Town development is in most cases open to a variety of suggestions and treatment, and therefore competitive designs are useful in exhibiting alternative solutions.

A landowner or leading citizen may be invited to promote such a competition under the auspices of the local authority, a course which has been attended in many cases with success.

LITERATURE.

Renewed attention may be asked to the volume of Transactions of the Town Planning Conference 1910, which is full of experimental results and illustrations, and the various Papers and communications in the *Institute Journal*, a list of which is appended [see VI.].

The reports of the Civic Commissions of most of the principal cities in the United States are good examples of the important results which are obtained by the union of local interests with architectural advice.

CREATION OF PUBLIC SENSE OF ORDERLINESS.

Local committees will not be under the necessity of even awaiting the proposal of a Town Planning Scheme to call them into activity. Observation, discussion, and study of the constant subject of Town Improvements are generally as well as specifically required. The practical attention which municipal authorities devote to such subjects generally overlooks the larger aspects, which are ultimately artistic, and though the proposals of merely architectural or æsthetic enthusiasts may be deemed by the careless to be unimportant, it may be urged with force that the orderliness, cleanliness, arrangement, expansion, and improvement of our towns cannot be neglected without material loss to the national life. These vital interests in municipal life are in the main neglected, or from absence of correlation become ineffective, from want of thought more than from lack of heart, and Architects are urged to recognise that these principles may be collected by representative persons in a committee or body that shall in each locality feel itself to be charged with a vigilant watch over all proposals for town development, extension, or improvement.

Municipalities will in due course respond to the creation of public spirit in their areas, and the creation of Town Improvement and Development Societies or Committees will promote this response. The Town Planning Act contemplates the representation of such societies and interests, and the Public Inquiry is the opportunity for practical suggestions and helpfulness, and Architects throughout the Empire are primarily those on whom the leadership devolves in this present great and public movement of Town Development.

VI.—LIST OF R.I.B.A. PAPERS ON TOWN PLANNING AND DEVELOPMENT.

SESSIONAL PAPERS, &c.

	JOURNAL R.I.B.A.
The Planning of Cities and Public Spaces [John W. Simpson]	Vol. XII. p. 341
" " " " [Professor Beresford Pite]	" p. 356
Town and Country : Some Aspects of Town Planning [H. V. Lanchester]	Vol. XVI. p. 257
The Planning and Laying-out of Public Places [H. Inigo Triggs]	Vol. XVII. p. 41
Suggestions to Promoters of Town Planning Schemes [R.I.B.A. Town Planning Committee]	Vol. XVIII. p. 661
Civic Development Survey [H. V. Lanchester]	Vol. XXII. p. 107
City Planning in America [W. R. Davidge]	" p. 418
Town Planning in Australia and New Zealand [W. R. Davidge]	" p. 437

PAPERS COLLECTED BY THE R.I.B.A. TOWN PLANNING COMMITTEE.

	JOURNAL R.I.B.A.
I. Chapters from "Modern Civic Art, or the City made Beautiful" [Charles Mulford Robinson] ...	Vol. XVI. p. 107
II. The Sociological Society on Town Planning Schemes	" p. 499
III. Chapters from Mr. John Sulman's work, "The Federal Capital"	" p. 679
IV. The Improvement of Sydney [John Sulman]	" p. 713
V. Buttstedt : Town Planning Studies translated from, "Der Städtebau" [Raymond Unwin] ...	Vol. XVII. p. 70
VI. Massachusetts Metropolitan Improvement Commission : Extracts from Report	" p. 73
VII. Extracts from Mr. Reginald Blomfield's "The Mistress' Art" (French Town Planning)	" p. 114
VIII. The Principles to be observed in laying out Towns and Suburbs [Edwin T. Hall]	" p. 163
IX. Some Suggestions on Town Planning [Halsey Ricardo]	" p. 219
X. Town Planning : a Lecture delivered at Hampstead Garden Suburb [Professor Beresford Pite]	" p. 267
XI. Architecture and Town Planning : a Lecture delivered at the Guildhall, London [Professor Beresford Pite]	" p. 341
XII. The Planning of Towns and Suburbs [Raymond Unwin]	" p. 365
XIII. Town Planning Studies : Extracts translated from "Der Städtebau"	" p. 410
XIV. Extracts from the 21st Annual Report of the City Planning Association of Philadelphia	" p. 454
XV. Explanation of the Building Plan of Marienburg	" p. 457
XVI. Comparison of Statutory Provisions relating to Streets in London and Liverpool [W. E. Riley]	" p. 484
XVII. The Improvement of the City of Sydney and its Suburbs [A. R. Jemmett]	" p. 533
XVIII. Municipal Art Societies [H. Inigo Triggs]	" p. 641
XIX. The Town Planning Act : Notes on Points of Special Interest to Architects [Raymond Unwin]	" p. 684
XXI. A Practical Guide in the Preparation of Town Planning Schemes. [Review by F. M. Elgood]	Vol. XVIII. p. 509

TRANSACTIONS OF THE VIITH INTERNATIONAL CONGRESS OF ARCHITECTS, 1906 (price 5s.),
containing the following Papers :

De la Disposition et du Développement des Rues et des Espaces libres dans les Villes—Papers by Charles Buis (p. 369), Eugène Hénard (p. 382), Dr. J. Stübgen (p. 409), B. Polles y Vivó, J. Majó y Ribas, M. Bertran de Quintana (p. 411), Gaston Trélat (p. 414), Augustin Rey (p. 426).

The Planning of the Residential Districts of Towns [Raymond Unwin], p. 417.

TRANSACTIONS OF THE TOWN PLANNING CONFERENCE, LONDON, 1910 (price 10s. 6d.)

SECTION I.—CITIES OF THE PAST.

The Hellenistic Period [Professor Percy Gardner, LL.D., F.S.A.].

Town Planning in the Roman World [Professor F. J. Haverfield, LL.D., F.S.A.].

Rome [Dr. Thomas Ashby, Director of the British School at Rome].

The Development of Town Planning during the Renaissance (XVI.—XVII. Century) [Dr. A. E. Brinckmann].

The Foundation of the French and English Gothic Towns in the South of France [Dr. Brinckmann].

SECTION II.—CITIES OF THE PRESENT.

Town Planning and the Preservation of Ancient Features [Professor Baldwin Brown, M.A.].

Cities of the Present as Representative of a Transition Period of Urban Development [Charles Mulford Robinson].

Notes on the Regulations governing the Planning and the Design of Buildings within the City of Paris [Louis Bonnier, Architecte-voyer-en-chef de la Ville de Paris].

Cause and Effect in the Modern City [H. V. Lanchester].

SECTION III.—CITY DEVELOPMENT AND EXTENSION.

The City Development Plan [Raymond Unwin].
 The Growth and Development of Towns [Augustin Rey].
 City Development [W. E. Riley, R.B.A., M.Inst.C.E., Superintending Architect of Metropolitan Buildings].
 Recent Progress in German Town Planning [Dr. Ing. H. J. Stübgen].
 The Greater Berlin Competition [Professor Dr. Rud. Eberstadt].

SECTION IV.—CITIES OF THE FUTURE.

The Immediate Future in England [Professor C. H. Reilly, M.A.].
 The City of the Future [Eugène Hénard, Architecte de la Ville de Paris].
 A City of the Future under a Democratic Government [Daniel H. Burnham].
 Cities of the Future : their Chances of Being [L. Cope Cornford].

SECTION V.—ARCHITECTURAL CONSIDERATIONS IN TOWN PLANNING.

The Architect and Town Planning [Professor Beresford Pite].
 Town Planning in Relation to Old and Congested Areas [Arthur Crow].
 Public Parks and Gardens [T. H. Mawson].
 The Architect and Civic Ornamentation [E. A. Rickards].
 Open Spaces and Running Waters [Colonel G. T. Plunkett, C.B., R.E. retired].
 Open Spaces, Gardens, and Recreation Grounds [Basil Holmes].
 City Improvements [Professor S. D. Adshead].
 Some Factors in Town Planning [Sir William Richmond, K.C.B., R.A.].
 The Restraint of Advertising [Richardson Evans, M.A.].
 Town Planning and Town Training : The Scope and Limits of the Town Planning Act.

SECTION VI.—SPECIAL STUDIES OF TOWN PLANS.

The Civic Survey of Edinburgh [Professor Patrick Geddes].
 The Planning of Khartoum and Omdurman [W. H. McLean].
 The Federal Capital of Australia [John Sulman].
 Greater London [G. L. Pepler].
 The Maintenance of the Fortifications and of the Zone subject to Military Regulations, Paris [Louis Dausset, formerly President of the Municipal Council of Paris].
 Rural Brussels [E. Staase and H. De Bruyne].
 Glasgow City Improvements [A. B. McDonald, M.Inst.C.E., City Engineer, Glasgow].
 The Improvement of Trafalgar Square [Wm. Woodward].

SECTION VII.—LEGISLATIVE CONDITIONS AND LEGAL STUDIES.

The Growth of Legal Control over Town Development in England [H. Chaloner Dowdall, M.A., B.C.L.].
 The Public and the Private Surveyor : their Respective Parts under the Housing and Town Planning Act, 1909 [Sir Alexander R. Stenning].
 The Housing and Town Planning Act, 1909 : The Possibilities of Section 44 [Harry S. Stewart].
 Town Planning and Land Tenure [C. H. B. Quennell].
 Town Planning *ab initio* [Ebenezer Howard].
 Town Planning Work and Legislation in Sweden during the last Fifty Years [Dr. Ing. Liljeborg, of Göteborg, Sweden].
 Italian Legislation respecting the Planning of Building Areas [Avv. Mario Cattaneo (Milan)].

MAPS, PLANS, &C.

Reproductions of 61 Maps, Plans, Views, &c., exhibited at the Royal Academy Town Planning Exhibition.

REVIEWS.

GERMAN CRIMINALITY.

The Desecration of French Monuments. By Edmund Gosse, C.B. "Edinburgh Review" for October. [Longmans, Green & Co., Paternoster Row.]

This is a most able and excellent statement, in the cause of civilisation, of the case against the Germans for their wanton and insensate destruction of beautiful architecture in France. Mr. Gosse shows very clearly that their ruthless brutality towards the honoured and cherished French monuments was a part of their scheme, inconceivably stupid as it was inconceivably vile, for terrorising, or punishing for patriotic defence, the inhabitants of invaded countries, and that it was carried out with the same calculated malice as their hellish crimes and cruelties towards the peoples themselves. He is careful to discriminate between the casual destruction, in warfare, of works of art and such predetermined vandalism, and says well that "no general can endanger his safety or change his plan of attack because a beautiful building stands in the way." That is obviously true. But no such exigencies dictated or prompted the bombardment of Reims Cathedral, or the absolutely gratuitous destruction of Arras, nor can any such excuse be found for the hideous havoc at Louvain and Malines. The author attributes the shelling of Reims to the brutal desire to inflict special humiliation on France by the insulting destruction of the most cherished of her historical monuments.

The Germans have since, as Mr. Gosse says, been so good as to suggest that a German architect might undertake the "restoration." We must resign ourselves to the fact that, except for the battered skeleton that remains, Reims Cathedral is a thing of the past. The Reims we knew and loved is gone, and we may hope that nothing in the way of "restoration," in the Viollet-le-Duc or Gilbert Scott sense, will ever be attempted, but that here, and at Louvain, Ypres, and Arras, in the case of the great monuments, conspicuous evidences of the ruin wrought by these abominable Teutons may remain as a monument to their perpetual shame and to the horrible stupidity of war. Doubtless the cathedral must and will be repaired, strengthened, re-roofed, and made fit once more for its high purposes, but we hope that no "restoring" of its ruined ornaments, sculptural and other, will be undertaken.

It is not, however, by any means, only the Cathedral at Reims that has suffered. The noble Church of St. Remi and its beautiful glass, the Archbishop's Palace

with its thirteenth-century chapel, the Maison des Ménétriers, and the fine seventeenth-century Town Hall, have all been battered and wrecked. The ancient nucleus of this ancient city is destroyed.

Arras, alas! with its unique and floridly effective Belfry and Town Hall, and its most delightful Grande and Petite Places, surrounded by ancient houses carried on arcades and columns, is entirely ruined without the excuse of any military necessity—a glaring act of sheer malevolence.

Mr. Gosse speaks lovingly, and small wonder, of Senlis, but, as I can testify, having visited it last year, within a few weeks of the German departure, the damage done there, though great and deplorable in the matter of delightful old houses, and utterly wanton, is inconsiderable beside the ruin of Reims and Arras. The cathedral has suffered very little, the other old churches and the College, not at all. Why the Germans, who deliberately burned so much of the Rue de la République, consisting chiefly of modern houses, and who shot the Mayor and several inhabitants in cold blood, stayed their hands where they did is a mystery. Senlis remains as a whole the delicious little French town it was, and in a short time probably will be its own most attractive self again.

Having passed, but a few days ago, through Sermaize-les-Bains, of which our author speaks, and having paused to contemplate its utter desolation, I can find no words with which to characterise its total destruction—total, that is, but for one or two isolated and German-owned villas and factories, which remain untouched as positive evidence of the careful deliberation of the outrage. The loss to the inhabitants is fearful and piteous, but æsthetically there is little to regret. Sermaize was almost entirely a modern collection of most inferior buildings. The neighbouring villages of Basancourt and Maurupt are also ruined, the former as absolutely as Pompeii, the latter not so completely; but these were fought over, taken and retaken in days of terrible struggles, and, pitiful as they are, do not fall into the same category of planned destruction.

If it is possible, at this hour, to add a shade to the black indictment of German criminality, Mr. Gosse has done it. The painful chronicle of his pages is illumined by his sympathetic style and his obvious affection for France.

EDWARD WARREN [F.].

Books Received.

Federal Capital, Commonwealth of Australia: Government Papers and Correspondence relating to Design for Lay-out of City, the Progress Plan, Federal Parliament House Competition, &c., &c. No. 153.—F. 8489. [Printed and Published for the Government of the Commonwealth of Australia.]



CHARLES HENRY ROWD HENMAN,
Quarter-Master-Sergeant, 1st Field Co.,
Divisional Engineers, R.N.D., *Licentiate*.
Killed in Action (see pp. 8, 31).



[Photo, Opie, Ltd.]

CHARLES JOSEPH NEWBERRY,
Private, 3rd Royal Fusiliers, 3rd Co., *Student*.
Died of wounds (see p. 8).



ALEXANDER WINGATE,
2nd Lieut., 9th Highland Light Infantry, *Licentiate*.
Killed in action (see pp. 8, 13).



EDGAR AND WILFRED HOYLE (Brothers),
Edgar (seated), killed in action; Wilfred, *Associate*,
died from pneumonia resulting from
exposure in the trenches.
(See JOURNAL, 8th May, pp. 337, 340).



9 CONDUIT STREET, LONDON, W., 20th November 1915.

CHRONICLE.

R.I.B.A. Record of Honour : Nineteenth List.

Missing, believed Killed.

EMERY, BURKETT J. (Member of the Birmingham Architectural Association), Lieut., 2nd Birmingham Battalion Royal Warwicks. Reported "Missing, believed killed."

Reports from brother officers show that Lieut. Emery acquitted himself very gallantly, and after being wounded kept in charge of his section in the action, which occurred on or about 12th October.

Lieut. Emery's architectural works consisted of several factories and domestic buildings in the Midlands. He had been in practice for about six or seven years.

Died of Wounds.

BARROW, SPENCER ELLWOOD [A.], Lieut., 5th Battalion King's Own Royal Lancaster Regiment. Wounded in France in May last. Died in St. Thomas's Hospital on 16th November.

Mentioned in Dispatches.

ROSENTHAL, CHARLES [A.], Lieut.-Colonel commanding the 3rd Field Artillery Brigade, Australian Imperial Force, mentioned in dispatches for distinguished services in the field during operations at the Dardanelles, has been appointed C.B. (Military Div.).

HONAN, MATTHEW [A.], Temp. Captain, Service Battalion, S. Lancashire Regiment. Specially mentioned in Sir Ian Hamilton's dispatch of 22nd September for services during the Dardanelles operations.

Enlisted in H.M. Forces.

The following is the Nineteenth List of Members, Licentiates and Students who have joined the Army or Navy for the period of the War, the total to date being 46 Fellows, 355 Associates, 186 Licentiates, and 230 Students :—

FELLOWS.

Thomas, R. Wellings : Royal Engineers.

ASSOCIATES.

Beckett, R. T. : Lieut., R.E.

Cockrill, E. A. : O.T.C.

Gilmour, T. G. : Army Ordnance Corps.

Hughes, Vernon H. : 2nd Lieut., Royal Garrison Artillery.
Logan, Philip N. : 15th Bn. Gloucester Regt.
Moore, F. W. : 2nd Lieut., R.E.
Pace, C. L. : 12th Bn. County of London.
Stone, G. M. : 2nd Lieut., R.E.
Trebilco, A. F. : Australian Imperial Forces.
Wall, R. L. : 2nd Lieut., 7th Bn. Dorset Regt.

LICENTIATES.

Foster, Gaius : R.A.M.C.
Huxley, W. S. : 2nd Lieut., 14th Bn. Royal Fusiliers.
Leggett, M. C. M. : Lieut., Baganda Rifles.
Lowbridge, G. C. : 2nd Lieut., R.E.
Mackenzie, John : Royal Navy.
Paton, J. Stanley : Lieut., Army Service Corps.

STUDENTS.

Harkess, William : 2nd Lieut., Army Service Corps.
Martin, W. H. : Royal Engineers.

Mr. J. D. Watt [Student], given among the "newly enlisted" in the last issue of the JOURNAL, enlisted at the beginning of the War in the 28th County of London Regiment (The Artists' Rifles), and was granted a Commission in the 2nd East Surrey Regiment while in France. He was invalided home in the Spring, and is now attached to the 4th Battalion, which is the reserve of the 2nd Battalion.

R.I.B.A. STAFF.

Fincher, W. (office attendant) : 3rd Bn. Queen Victoria's Rifles.

Recruiting and the Unemployment Register.

In view of Lord Derby's recruiting campaign the Council have decided that the R.I.B.A. Unemployment Register shall be closed to all unmarried men of military age unless they can produce evidence of physical unfitness for service, or unless they have enlisted and been passed into the Reserve.

Architects "on Service" : Professional Scheme to Preserve their Practice.

A meeting of the Dundee Institute of Architects has been held for the purpose of considering recruiting in the profession in Dundee under Lord Derby's scheme, and it was agreed to form a Committee of all members ineligible under the scheme to undertake without remuneration the conduct of the business of those members who enlist when called out for service.

War-Time Work for Architects.

A conference of representatives of South Yorkshire towns and cities was held at the Leeds Town Hall on the 4th inst. for the purpose of forming a committee to advance a scheme for providing employment for architects whose work has come to a standstill owing to the War. Two similar schemes are already in operation for Greater London and Lancashire, supported by grants allocated by the Government Committee from the Prince of Wales's Fund. The Conference, which was convened by Mr. H. S. Chorley [F.], was presided over by the Lord Mayor of Leeds (Mr. J. E. Bedford).

Mr. C. Harrison Townsend [F.], on behalf of the Civic Survey for Greater London, explaining the scheme, said that in January last the Government Committee for the Prevention and Relief of Distress sanctioned a plan prepared by the Architects' War Committee with

a view to employing the energies of professional men who had lost their work owing to the war. They suggested that the end could best be attained by the organisation of a series of Civic Surveys. The work consisted in collecting and recording, in an easily accessible manner, such data in respect of any city or area as were required in order to attain a complete knowledge of the whole of those interests upon the preservation or enhancement of which depended the welfare of the inhabitants. The data covered the whole ground of a city's life and activities, and the facts were set forth by means of diagrams. It was not sought to offer suggestions as to the development of any particular district, or to indicate schemes of social amelioration, but to present the facts in such a shape as to be of the utmost assistance to the student of the city, providing material upon which he might base his recommendations for the city of the future. The Survey would be of enormous value to the technical adviser proposing to carry out improvements, and as the data would have been gathered at a time when no immediate proposal to acquire land was under consideration, the risk of speculation on a rising value of the property affected would be eliminated.

In a discussion which followed Mr. Townsend's address Dr. Angus (Medical Officer of Health for Leeds) said that if the Survey succeeded in exhibiting in diagrammatic form the confused overlapping of our areas of local government it would provide the best argument for a re-adjustment on uniform lines. As an instance of this, he said that marriages being now tabulated according to Poor Law areas, and these areas in Leeds not being coterminous with the municipal boundaries of the city, it was impossible to tell the number of marriages that took place in Leeds. Similarly, the vital statistics as supplied by the Registrar-General had to be entirely transformed to make them applicable to the area of the city. For the same reason the utmost difficulty arose over the taking of the National Register. Whereas the central machinery was that of the Registrar-General, the compilation of the Register itself was given to municipalities, whose unit of organisation, however, was the ward. In the end, the Medical Officer had to act as a sort of intermediary. Again, it was almost impossible, as things stood at present, to compare one set of statistics with another, since one was never sure that they were arrived at by the same method. A Civic Survey would be a great boon if it introduced some uniformity in these things.

The Bishop of Wakefield (Dr. Eden) heartily welcomed the scheme, saying that if it had been in existence at Doncaster before the great developments took place there a few years ago an immense amount of expense would have been saved, and it would also have prevented the erection of what would be districts of slums twenty-five years hence. We were very slow to take up co-ordinated ideas in England, but he hoped the scheme would spread all over the country. He thought, however, that it should be supported officially, so that when the Prince of Wales's Fund was exhausted public bodies would carry on the work. Extraordinary results had been obtained in Edinburgh by taking up the Civic Survey in connection with the high schools from the point of view of local history. If side by side with the professional movement something of the sort could be done here it would add to its human interest. It had been forced upon them by the emergency of the professional classes, and if they could make it an official educational policy they would give it longer life and vastly increase its usefulness.

The Lord Mayor of Leeds suggested that the architects who made the Survey should take note of matters of historical and archaeological interest, in regard to which, he said, there was a lamentable amount of ignorance.

Miss Unwin (Shipley) said that unless the existing varied methods of local government and administration could be co-ordinated it was difficult to see how very much could be done in the direction of improvement.

A local consultative committee was appointed, with power to add to their number, among those elected being the Lord Mayors of Leeds and Bradford, Mr. Charles Lupton (Lord Mayor-elect of Leeds), Alderman Jessop (Huddersfield), the Vice-Chancellor of Leeds University (Mr. M. E. Sadler), the Medical Officers of Health and Engineers for Leeds, Bradford, Batley, Dewsbury, Wakefield, and Spenborough, Miss Unwin, Mr. James Graham (Secretary for Education, Leeds), and Mr. H. Ryder (head master of the Leeds School of Art).

Substitutes for Men withdrawn for Service in the Military Forces.

The Report has been published as a Government Paper [Cd. 8110] of the Committee appointed by the Home Secretary to consider the conditions of clerical and commercial employment with a view to advising what steps should be taken, by the employment of women or otherwise, to replace men withdrawn for service in the military forces. Mr. Cecil Harmsworth, M.P., was appointed Chairman, and Mr. M. H. Whitelegge, of the Home Office, Secretary.*

The Committee express the conviction that as the present recruiting movement gathers momentum the need throughout the country for an adequate supply of substitutes for enlisted men will become more and more pressing. There can be little doubt that, unless immediate efforts on well-considered lines are made to mobilise the reserves of possible clerical labour, and especially of woman labour, the business community and the country will soon be confronted with a situation of great gravity. The only classes from whom a supply of substitutes can be drawn are: (1) Men above the military age, and women already trained in clerical work and unemployed; (2) Lads under military age; (3) Sailors and soldiers invalided out of the Services; (4) Women without clerical experience. As regards the third class, very few have yet been discharged from military service, and the Committee suggest that steps be taken by the authorities to release from service all invalided men as soon as it is seen that they will be unable to serve again in the fighting line. Most of these will be quite fit to resume their previous duties, and it is in the interest both of the country and the men themselves that they should be returned as quickly as possible to civil employment. The bulk of the substitutes will have to be drawn from the ranks of unemployed women. The Committee recommend that every effort should be made to attract women of intelligence and education for positions of responsibility. The head-mistresses of Secondary Schools and the University authorities would be able to give valuable assistance in securing the services of such women. Employers should give preference to the wives

* The Committee having invited the R.I.B.A., among a number of other institutions, to send representatives to meet the Committee and discuss the position, the President and Secretary attended a Conference held at the Home Office on October 29.

and families of men on their staff who have enlisted. It is considered that a short whole-time training lasting from one to two months would help to familiarise women with business routine and requirements. The Committee propose that in all commercial centres a local body representative of higher education and of the commerce of the district should be formed, whose task should be: (1) To ascertain the present and prospective requirements of employers in the locality, both as to the number of substitutes and the kind of training; (2) To organise training classes of an emergency character for giving a general groundwork in commercial knowledge and office routine; (3) To take steps to attract women of sufficient education to this class of work; (4) To compile a register of those who pass through the emergency classes with a view to getting them placed in employment. Schemes on these general lines are already on foot in London, Manchester and other places. The Committee emphasise the necessity of making it quite clear that the employment of women to act as substitutes is temporary only, and that employers will give an assurance to the men offering for service that their places will be kept open for them. The Committee suggest that the scale of wages payable to women should, as far as conditions permit and as the work deputed to them reasonably justifies, be based on the rate of wages paid to men who have been engaged in similar duties. Appended to the Report are Suggested Emergency Courses for Training Women for Clerical Employment. These consist of a course of training for general clerical work, and a course of training for shorthand-typists.

Temporary Village Churches for Belgium.

The ruthless destruction of villages in Belgium has included the ruin and desecration of many churches. It must necessarily be a long time before any of them can be rebuilt in a permanent form, and a movement is on foot to present Cardinal Mercier and his desolated dioceses with one or more wooden churches. It is proposed that these buildings should be made by the people who have suffered so much from their country's destruction—the Belgian refugees. The churches, which would be started either in Holland or France, would be made in sections bolted together, so that they might be used by the refugees in their temporary homes until the time comes for them to return to their own country. The buildings could then be re-erected on a concrete platform rapidly and inexpensively, and would last many years. In those places where the churches are to be erected the rebuilding of the permanent church could be postponed until the people could afford to do it in the same spirit as their forefathers built those which have been destroyed. The size might vary, but the average church would hold about 600 people. It is desired that the buildings should not be the cheapest things possible, but that they may represent something of the sympathy and affection which the donors have to the people and to the Church for whom the gift is designed.

It is hoped soon to have funds enough to begin building the first church. Arrangements are in progress for erecting the churches in Holland, as a very large number of Belgians are living there to whom the work would be of immediate value. Workshops have

already been organised in the camps of the interned Belgian soldiers (of whom there are about 30,000) and in the civilian refugee camps, where technical schools have also been started for instruction in handicraft work. Amongst these communities there are a large number of skilled craftsmen, and an opportunity to help in the construction of these churches is welcomed by the authorities, because of the work it gives to those suffering from lack of employment, and because of the immediate support it will give to the wives and children of the interned soldiers, many of whom are living under most distressing conditions.

The scheme has the sympathetic support of Cardinal Bourne, Monseigneur de Wachter, Auxiliary Bishop and Vicar-General of Cardinal Mercier, and the Belgian Ministers of Justice and Public Works. Appeal is made for donations, which should be sent to Monseigneur de Wachter, at Bishop's House, St. George's Road, Southwark, S.E. The arrangements are in the hands of the "Committee for La Maison de Dieu," at 45 Salisbury Square, Fleet Street.

Mr. Charles Spooner [F.], Hon. Director of the Hampshire House Refugee Workshops and a member of the Maison de Dieu Committee, has designed the first church proposed to be built, which is to be dedicated to Our Lady and St. George.

The Hampshire House Refugee Committee has already begun to employ the Belgian cabinet-makers under its care on church furniture, and if any donor should wish to give a special offering he should name the kind and price of the ornament or piece of church furniture he would like to present, and designs would be submitted for his approval. Enquiries should be addressed to Mr. Douglas Pepler, Hampshire House, Hammersmith.

Mr. Fred Rowntree [F.], Hon. Treasurer of the Hampshire House Refugee Workshops and a member of the Maison de Dieu Committee, writes that for several months he has been associated with a Committee of the Society of Friends who have been helping to organise employment in the Belgian refugee camps in Holland. Workshops have been established in these camps, and a large number of "maisons démontables" have been made which are being temporarily used by families of refugees, and which will at the end of the war be easily taken to pieces and transferred to Belgium. In connection with these workshops are smithies, where the bolts, the hinges, and other iron-work are made, as well as the kitchen stoves.

The Decoration of Westminster Cathedral.

Mr. P. G. Konody's criticism in the *Observer* of the decoration now being carried out at Westminster Cathedral has evoked an interesting discussion. In the issue of the 7th inst. Mr. Henry C. Brewer, R.I., says that Cardinal Vaughan's original idea was to erect a reproduction of Old St. Peter's, Rome, for the new Westminster Cathedral. "My father," says Mr. Brewer, "had been making some careful paintings of that building restored, and Cardinal Vaughan called

frequently to see them and arranged that a lecture should be given at his house on the subject. Mr. Bentley was to carry out the design, and went over to Italy for the purpose of studying the existing Basilica churches. When Mr. Bentley returned he had been so much struck with the Byzantine buildings that he persuaded Cardinal Vaughan to throw over the original idea and build his cathedral in the Byzantine style. Shortly before Mr. Bentley's death I was going over to Italy to study early Italian decorations, and Mr. Bentley gave an afternoon in instructing me where to go and what to study. He carefully noted down the special mosaics he considered the best, and I found when in Italy they were in every case the archaic style of the Byzantine, between the sixth and twelfth centuries. He said that he was going to try to carry out the decoration of the cathedral in the style of that of the Sanctuary of St. Vitale, at Ravenna, for he thought it most beautiful and also adaptable to his purpose; in fact, he would use it as a sort of key to work upon. There is no doubt that the work at Ravenna is one of the most lovely of all time, and eminently suited to the purpose to which Mr. Bentley wished it to be applied; therefore it seems a pity that this standard is not kept in mind by the various artists at work at the cathedral, for the result then might be the means of giving unity to the decoration of the building, whereas the expression of the various individualities can scarcely be justified by the interest of their work, and will only produce a scattered effect."

Mediæval Stained Glass : Analysis of Fragments of Reims Windows.

It is announced by the *Daily Express* Correspondent at Paris that the destruction of the windows of Reims Cathedral by the German artillery has revealed to French scientists the secret of the brilliant colours of mediæval stained glass. M. Chesneau, Assistant Director of the French School of Mines, has at last been able to collect and analyse many of the fragments picked up about the walls. He reports that, in staining glass blue with the blue extract of arsenio-sulphates of natural cobalt, the workmen of the thirteenth century recognised the advantage of a delicate process by which the nickel (always associated with cobalt in nature) was eliminated. Thus they avoided the brown shade and the darkness that result from the presence of nickel. Then they intentionally added copper, the greenish-blue tint of which corrects the too violet blue of the pure oxide of cobalt. They produced their violet glass with the natural unpurified ore of manganese. Their red glass, the secret of which was lost for many centuries and that is equalled now only by that made with gold, is really a bottle-green glass covered with an extremely thin enamel coloured with oxidulated copper—that is, copper very slightly oxidised.

Architectural Association War Service Bureau.

Mr. F. R. YERBURY writes:—The Architectural Association War Service Bureau, which has already

recruited nearly 1,000 men for the various specialised branches of the Service, is now endeavouring to raise 100 men for the 2nd London Sanitary Company R.A.M.C. (T.).

The work required of members of the Corps should specially appeal to members of the Architectural and Surveying professions, and others with a good knowledge of sanitary matters. I shall be very glad to forward particulars of rates of pay, etc., to anyone sending a stamped and addressed envelope.

The War Service Bureau is still open to assist all those connected with the Architectural and Surveying professions and the Building Trades by supplying them with information and assisting them to enlist in those special branches of the Army where their professional training is likely to be of value.

Men from 19 to 38 years of age are also required for the Home Counties Divisional Artillery for Imperial Service. Aptitude for map reading, etc., is an advantage. Arrangements will be made for parties of men enlisting through the Bureau to be kept together.

GEORGE HENRY HUNT [F.].

In his own circle of intimate friends the chief characteristic that distinguished the late George Henry Hunt, or "Jimmie Hunt," as they familiarly called him, was the spirit and practice of devotion, first to his old father, an architect, who still survives him, then to his friends, and not least of all to his chosen profession of architecture. To this marked feature of his character must be added an extreme generosity and a natural geniality of disposition by which he built up friendships around him that nothing short of death could sever. By nature of a somewhat shy and nervous disposition, he instinctively avoided societies and meetings (except masonic), and never wrote or delivered any lecture or paper; this accounts for the fact that he did not become a Fellow of the Institute until the year 1891, and explains why he rarely attended its meetings in spite of the fact that so many members of the Institute were his personal friends.

George Henry Hunt was born at Evesham in 1851, and educated at the King's College, within the precincts of Gloucester Cathedral. He served his articles with Messrs. Nelson & Harvey, in the City of London, during the years 1867–1872, and having been grounded in the older classical tradition, he never departed far from its influence. He could never bring himself to study or design anything on Gothic lines. The Gothic revival, in fact, never touched him, which is the more remarkable as he passed through the Academy Schools at a time when the late Sir Gilbert Scott was giving his famous lectures. At this period he gave a striking instance of his unselfish disposition, for, being well in the running for the travelling studentship of the Academy, Hunt omitted to send in his drawings in order that a less fortunately situated

fellow student might obtain the benefits of travelling abroad. Hunt himself did, however, enjoy this advantage of travelling and sketching in France and Italy for a period of twelve months in the years 1873 and 1874. He carefully studied the Renaissance work of both countries, but it was the work of the Renaissance in France which appealed to him most and proved the strongest influence to the end. Hunt's praise was ever for France, for the people and for their artistic methods and ideals, from which he excepted only their characteristic ornament. This was invariably absent from his detail; he might be charged with looking at Italian architecture through French spectacles.

Being a rapid draughtsman and caring for work only for the work's sake, he soon entered the lists as a competitor, and in 1875, in partnership with his friend the late Thomas Verity, achieved an early success with the Scarborough Spa Buildings. For this competition Professor Cockerell was the assessor. In the still remembered great competition in 1884 for the intended joint Admiralty and War Office buildings in Whitehall, the preliminary design of Verity and Hunt was amongst the few selected for the second competition, and it was generally felt that this was one of the most notable designs produced on that memorable occasion. About the same time they won the competition for the Nottingham Guildhall; of this scheme a portion only was executed at the time, but at a later period Hunt prepared carefully revised plans for the ultimate completion of the buildings. In all these joint works Hunt was mainly responsible for the elevations and sections and for the full-size details. He was always willing and ready to enter into some competition or to work jointly with anyone who had gained his sympathies, so that during his whole career there was hardly ever a time when he was not collaborating with one of his friends.

Always ready to give a helping hand to students or young architects in their earliest efforts, Hunt treated his pupils and assistants with the greatest consideration, succeeded in drawing out of them their best efforts, and inspiring them with enthusiasm for their work. Genial by nature, he hated gloom, and once caused much amusement in his office by countering the pessimism of an assistant by giving him a penny to make his usual glass of beer for lunch into three-pennyworth.

In his architectural work Hunt was most careful, accurate and painstaking. His schemes were built up by assembling parts previously well studied. Joined piece by piece, these he would then compel to "come together" to his liking. He worked on these lines rather than by dealing with the problem before him as a whole, and then developing detail of a scheme whose main lines had been unalterably determined upon.

With Hunt neatness was almost a fetish, and unless a drawing was clear, accurate and clean he could not realise its intention or work with any satisfaction

upon it. Looking at the immense amount of care that was bestowed upon all his work, it is surprising that Hunt accomplished so much. Upon one occasion he sent some quarter-scale "sketches" (as he called them) for a new chancel to a small country church in Ireland, and the first intimation he received of their arrival was in about twelve months' time when photographs of the executed work were enclosed. He had few or no real interests outside his chosen work, always excepting the companionship of his friends. Having no hobbies nor any liking for sport except cricket and shooting earlier in life, he laboured incessantly at architecture, in which he took a real delight. As building, his work was always strong and substantial, and Hunt had a way of getting it well built, not by bullying, but by the scorn he expressed for anything shoddy or faked, and by the interest he inspired in all who were concerned in its execution, whether as assistants, builders, foremen or workmen.

The accompanying list of works will give some idea of the extent of his practice, but it should be pointed out that it was in municipal and bank architecture that Hunt was always at his best. Probably the Guildhall at Gloucester, the city of his earliest attachment, is the work by which he is best represented.

His death took place on Tuesday, 17th August, at his father's house at Evesham, where he was accustomed to spend more than half his time, and where he carried on a country practice. His death followed an illness of only two weeks' duration, and has thus ended a professional career which has invoked the deepest feelings of affectionate regard. Such memories are due to his unselfish and sympathetic disposition, and to a kindness extended to all, and not least to those architects and students with whom during a life of 64 years he had entered into the most genial relations.

MR. G. H. HUNT'S PRINCIPAL WORKS.

In conjunction with the late Thomas Verity.—The Spa and Houses at Scarborough; Nottingham Guildhall; Nottingham University (Alterations); Royal Agricultural Hall, Islington (Alterations); Admiralty and War Office Competition.

With Mr. William Harvey.—Two Extensions to the West London Hospital; Competition designs for King's College Hospital.

Premises for the Capital and Counties Bank.—Threadneedle Street, Head Office; Kingsway; King William Street; Evesham; Chippenham; Guildford; West Worthing; Landport; Cambridge; Gloucester; Littlehampton; Cranleigh; Lydney; Cinderford; Newent; Abergavenny; Stow-on-the-Wold; Broadway; Moreton-in-Marsh; Cheltenham.

Miscellaneous Works.—The Guildhall, Gloucester; Manchester Ship Canal Offices; Drill Hall, Patricroft; Parr's Bank, Seven Kings; German Bank, St. Peter's Alley; Premised design for the Birmingham Law Courts; Large Offices and Buildings, Hong Kong (with Mr. J. Orange).

Domestic Work.—Houses, Chester-le-Street, Lord Cathcart; Englethwaite, Cumberland; Sand Hutton, Yorkshire; and at Chelmsford, Enfield, Northwood, Hayes, Guildford, Hillingdon, and Elstree.

Various Buildings at Evesham.—Cottage Hospital; Alterations and Jubilee Clock Tower, the Town Hall; Free Library and Assembly Room; Workhouse Buildings; Printing Works; Several shops and premises; Roman Catholic Schools; Priest's House; Rowing Club Boathouse; Conservative Club;

Work at St. Laurence's Church and Baptist Chapel; Vestry, St. Peter's Church.

Evesham, Domestic Work.—Six houses on Greenhill, and on Longdon Hill, Knowle Hill, Horsbridge Hill, Holly Mount; Rebuilding Abbey-Manor after Fire and Wood Norton (for the Duc d'Orléans), costing upwards of £55,000.

In the Evesham District.—Vicarages at Childs Wickham and Charlton; Mansion, Great Alne; Houses, Stables, Lodges, etc., at Stratford-on-Avon, Campden, Lench Wick, Childs Wickham, Dumbleton, Bridgnorth, Bidford, Chapel Oak, Eckington, Cropthorne, Dorsington, and Bermington; Workhouse Buildings, Pershore, etc., etc.

At Broadway.—House and Buildings, Top Farm; Extensions, The Lygon Arms; County Council Schools; "West End"; "Walnuts"; "Pond Close"; Design for Public Hall.

Mr. Hunt acted as assessor in the competition for the Birmingham New Blue Coat School.

CHAS. E. BATEMAN [F.].

OBITUARY.

Charles Henry Rowed Henman [*Licentiate*], killed in action in the Gallipoli campaign, was the eldest son of Mr. Charles Henman [A.], and was born in December 1878 and educated at Whitgift Grammar School, Croydon. As a boy he developed leanings towards a military career, joining the Cadet Corps in his 15th year, and passing two years later into the 1st Volunteer Battalion, The Queen's. He completed his articles with his father at the end of 1899, and in January 1900 joined the 50th Company (Hants) Imperial Yeomanry. He was on active service with his regiment in South Africa for fourteen months, receiving the medal and five clasps. Taking his discharge in June 1901, he spent the next nine months partly in his father's office and partly in that of his uncle, Mr. William Henman [F.], in Birmingham. He then entered the Royal Engineers' Office, Sheerness, remaining there until November 1903, when he married and, with his wife, went to Bermuda, where he had obtained a post in the Royal Engineers' Office. On reduction of the establishment there he returned to England and entered the Barracks Construction Department of the War Office. In September 1914 he obtained leave "to join one of the corps being raised to strengthen the military forces." He elected to enlist in the Divisional Engineers' 1st Field Company, Royal Naval Division. He was soon promoted to the highest non-commissioned rank, and might have had a commission, but preferred to act as Quartermaster-Sergeant: "in that rank," he said, "I shall be better able to see to the comfort of the 'boys.'" On the 1st March 1915 he left England with the British Expeditionary Force for the Mediterranean. He was killed in the trenches on 29th July by a shrapnel shell which burst unusually low. Major G. E. Morgan, commanding No. 1 Field Company, writes: "His tragic end is all the more poignant to me as less than a quarter of a minute previously he had been explaining to me the efforts he was making to improve the food and comfort of the men, a subject he had very near at heart. Of all ranks he was probably the most popular man in the Company. Always cheerful and in good spirits, he infused the same spirit throughout

the Company. He was a tower of strength and an example to us all." Writing on behalf of the N.C.O.'s and men, Serg.-Major A. B. Stewart says, "We mourn the loss of a beloved comrade who was always kind and cheerful to all. A great part of the comparative comfort we have enjoyed out here has been due to his efforts." He leaves a widow and one child, a girl, nine years old.

NOTICES.

Plymouth Co-operative Society's Competition.

The Premiated Designs in the Plymouth Co-operative Society's Competition will be on view at the Architectural Association, 18 Tufon Street, Westminster, during the week commencing 22nd November.

THE SECOND GENERAL MEETING (BUSINESS) of the Session 1915-16 will be held Monday, 29th November 1915, when the Chair will be taken at THREE O'CLOCK P.M. precisely, for the following purposes:—

To read the Minutes of the General Meeting (Ordinary) held Monday, 1st November; formally to admit members attending for the first time, &c.

To proceed with the election of candidates for membership under By-laws 8, 9, and 10 [*see names below*].

Chairman to move that the Regulations for Architectural Competitions [KALENDAR, p. 464] be altered as follows:—

1. The second paragraph to read:—"Members of the Royal Institute of British Architects and of its Allied Societies are only permitted to take part in Competitions in accordance with these Regulations, which are intended to apply to all Competitions other than private Competitions instituted by private individuals or firms."

2. The footnote at the bottom of the first page to be omitted.

CANDIDATES FOR ELECTION, Nov. 29.

As FELLOWS (11).

ALLEN: JOHN GORDON [A. 1910]; 4 Tavistock Square, W.C.; 13 Holmdale Road, West Hampstead, N.W.

Proposers: Louis Ambler, Albert Howell, Arthur T. Bolton.

FARMER: JAMES WESTBROOK [A. 1908]; Cangallo 564, Buenos Aires, Argentina.

Proposers: J. Leonard Williams, Lionel U. Grace, Rowland Plumble.

QUIGGIN: EDGAR [A. 1905]; 67 Lord Street, Liverpool.

Proposers: Henry Hartley, Charles W. Harris, Arnold Thornely.

ROBSON: PHILIP APPELEY [A. 1897]; St. Stephen's House, Victoria Embankment, Westminster, S.W.; Rede Place, East Grinstead.

Proposers: Edward Robert Robson, Sir Ernest George, A.R.A., H. V. Lanchester.

Together with the following *Licentiates*, who have passed the Examination qualifying for candidature as Fellows:—

BLACK: ALFRED BARHAM; Gilbert Place, Adelaide; Stanley Street, North Adelaide.

Proposers: Edward Jno. Woods, Albert Selmar Conrad, Robert J. Haddon.

FORBES: JAMES EDWIN; 16 Old Square, Lincoln's Inn, W.C.; The Shelling, Chalfont St., Giles, Bucks.
Proposers: Alfred Cox, Herbert W. Wills, Howard Chatfield Clarke.

MACNIVEN: GEORGE DONALDSON; Local Government Board for Scotland, 125 George Street, Edinburgh; 13 Cluny Drive, Edinburgh.

Proposers: Sir Robert Lorimer, A.R.S.A., John Wilson, A. Lorne Campbell.

PEARSON: CHARLES BULMAN; 18 Dalton Square, Lancaster.
Proposers: Ernest Woodhouse, John Bilson, W. Campbell Jones.

TATE: JOHN DUNCAN; 16 Old Square, Lincoln's Inn, W.C.; Lexden, Oval Way, Gerrard's Cross, Bucks.

Proposers: Alfred Cox, Herbert W. Wills, Howard Chatfield Clarke.

THOMPSON: CHARLES CLAYTON; The Market Place, Derby; 32 St. John Street, Lichfield.

Proposers: Percy H. Currey, E. Guy Dawber, George H. Widdows.

WITTET: GEORGE, J.P.; Public Works Secretariat, Bombay; Byculla Club, Bombay.

Proposers: John Begg, Henry A. Crouch, E. Montagu Thomas.

AS ASSOCIATES (23).

ADAMS: PERCY JOYCE [S. 1911]; Fairmead, Woodside Road, Woodford, Essex.

Proposers: Hugh P. G. Maule, Edmund Wimperis, A. E. Richardson.

ANDREW: HARRY [S. 1912]; 56 Whitefriargate, Hull; c/o Messrs. Lowther & Rigby, 77 Lowgate, Hull.

Proposers: W. S. Walker, and the Council.

BALSARA: PHEROZSHAH FARDOONJI [Special]; Solakoti Building, Grant Road, Bombay.

Proposers: Owen Cary Little, J. Craddock Perkin, Harry Redfern.

BENNETT: JAMES [S. 1914]; c/o Messrs. John Burnet & Son, 239 St. Vincent Street, Glasgow; Hillview, Saline, Fife.
Proposers: Sir John Burnet, R.S.A., Alexander N. Paterson, A.R.S.A., John Watson.

BRUCE: REGINALD, F.A.S.I. [Special]; 21 Holdenhurst Avenue, North Finchley, N.

Proposers: Rowland Plumbé, John Slater, Edwin T. Hall.

CATCHPOLE: EDGAR GOODING [S. 1908]; 46 Christchurch Street, Ipswich; Town Hall, Ipswich.

Proposers: H. Percy Adams, F. A. Powell, William Eade.

DUNCAN: ALEXANDER MACLAUGHLAN [Special]; Rahoy, Lenzie, Dumbartonshire; c/o R. J. Walker, Esq., 108 Douglas Street, Glasgow.

Proposers: David Salmond, P. H. Thoms, John Watson.

FRANCIS: ERIC CARWARDINE [S. 1911]; 14 St. Andrew's Mansions, Dorset Street, W.; St. Tewdric, nr. Chepstow.
Proposers: E. Guy Dawber, Detmar Blow, E. B. Hoare.

HORNEMAN: JOHN HENRY [S. 1909]; c/o Messrs. Stevens & Gregson, 32 Victoria Street, S.W.; 68 Bolingbroke Grove, Wandsworth Common, S.W.

Proposers: C. Stanley Peach, Charles F. Stevens, Fred Rowntree.

LOWETH: SIDNEY HAROLD [S. 1913]; 67 Downs Park Road, Hackney Downs, N.; Trafalgar House, Trafalgar Square, S.W.

Proposers: W. R. Jaggard, W. E. Riley, J. A. Gill-Knight.

MITCHELL: CYRIL HAWTHORN [S. 1914]; Wellington, N.Z.; 8 Mecklenburgh Street, W.C.

Proposers: The Council.

MUSMAN: ERNEST PAUL BRANDER, B.A. Lond. [S. 1912]; 27

Upper Phillimore Place, Kensington, W.; H.M. Office of Works, Storey's Gate, Westminster, S.W.

Proposers: Professor F. M. Simpson, A. E. Richardson, Professor S. D. Adshead.

NICHOLS: CHARLES EDWIN [S. 1911]; Rectory Farm, Eckington, Sheffield; Chesterfield.

Proposers: The Council.

PAGE: CHARLES LANCASHIRE [S. 1907]; 28 St. George's Street, Primrose Hill, N.W.; H.M. Office of Works, Storey's Gate, Westminster, S.W.

Proposers: Joseph Swarbrick, Sir Henry Tanner, John B. Gass.

REIVE: THOMAS [S. 1908]; Glencairn, Ertwood Road, Levenshulme, Manchester; c/o Messrs. Bradshaw, Gass & Hope, 19 Silverwell Street, Bolton.

Proposers: John B. Gass, Isaac Taylor, Frank B. Dunkerley.

ROBERTSON: MANNING DUDIN [S. 1911]; 50 Norfolk Sq., W.

Proposers: Sir Ernest George, A.R.A., Alfred B. Yeates, Edward Warren.

ROBINSON: ALFRED DOUGLAS [S. 1909]; 45 Bishopsgate, E.C.; The Abbey, Thorpe-le-Soken, Essex.

Proposers: A. Heron Ryan-Tenison, E. Guy Dawber, H. B. Creswell.

SAYER: HARVEY ROBERT [S. 1905]; 3 Havelock Road, West Marlands, Southampton; 45 Choumert Road, Peckham.

Proposers: The Council and Professor Beresford Pite.

TURNER: ALBERT ISAAC [S. 1909]; 65 Wilmington Gardens, New Barking, Essex.

Proposers: John W. Little, A. R. Jemmett, Arthur J. Davis.

WALKER: HAROLD FREDERICK [S. 1913]; 13 New Street, Dorset Square, N.W.; 19 Queen Anne's Gate, S.W.

Proposers: Walter R. Jaggard, H. Huntly-Gordon, Sir Aston Webb, K.C.V.O., C.B., R.A.

WILLIAMS: ENOCH [S. 1908]; "Norton," 50 Canada Road, Cardiff; Glamorgan County Council, Cardiff.

Proposers: Glendinning Moxham, W. James Nash, Lennox Robertson.

WILSHIRE: REGINALD SHARMAN [S. 1912]; 57 Adolphus Road, Finsbury Park, N.; Architects' Department, Essex County Council, Chelmsford.

Proposers: E. Vincent Harris, Fred Chancellor, Ernest Newton, A.R.A.

YOUNG: WILLIAM CECIL [S. 1910]; 19 King's Drive, Heaton Moor, nr. Stockport; c/o Isaac Taylor, Esq., 17 St. Ann's Square, Manchester.

Proposers: Isaac Taylor, Percy S. Worthington, Paul Ogden.

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TWELFTH-CENTURY CAPITALS, ROUEN CATHEDRAL.

THE STUDY OF MEDIÆVAL ARCHITECTURE.

By Professor CHARLES H. MOORE, A.M. [*Hon. A.*].

NOTWITHSTANDING the interest in mediæval architecture that has prevailed since the beginning of the last century, it cannot be said that the subject has yet been studied with the faithfulness it demands. The literature relating to it is indeed voluminous, but in so far as the art itself is concerned—that is, apart from its archæological and historical aspects—it is hardly too much to say that most of the books that have been written show inexact knowledge and inattention to essential character in the different types of mediæval building. What may be called the holiday method of observation is too obvious in most of them. Books of superficial impressions, mistaken affirmations, and personal prejudices are too often found in the hands of those who seek information on this great subject.

There have indeed been a few writers of great competence. The names of Willis and Viollet-le-Duc will endure so long as intelligent interest in mediæval architecture shall survive. Both of them had native aptitude, were actuated by an absorbing interest in their subject, took great and unremitting pains to equip themselves, and, within the range of what they attempted, are in the main entirely trustworthy. Like other competent and conscientious writers, they make no affirmations unsupported by carefully observed facts. Neither of them was, indeed, much concerned with the æsthetic side of architecture, nor does either of them show fine æsthetic discrimination; but this side is hard to treat clearly, since æsthetics transcend human science, and every man's feeling will be moved differently by a work of art. Few others can be named as equals of Willis and Viollet-le-Duc within their proper fields.* Several others might, however, be added who have done excellent work in limited fields, notably M. F. de Verneilh, who, in *L'Architecture Byzantine en France* (Paris, 1851), has given the most excellent, and the most lucid, exposition of Byzantine architecture on its structural side that has been produced. This book, notwithstanding such errors as to dates and origins as it may contain, is a monumental work of great importance. Ruskin's noble feeling and impassioned eloquence touch

* Two other writers of competence within their own fields are Quicherat and Choisy. But Quicherat was only an archæologist, and Choisy was an engineer with little appreciation of the fine art of architecture.

some of the higher qualities of expression in architecture that other writers have failed to grasp. But his study of architecture was not profound, and his strong feeling and self-confidence led to dogmatism which weakens his otherwise incomparable work. Among later writers, Mr. John Bilson has done admirable work. His studies of Durham, Augers, and other monuments are models of competent investigation and clear exposition. I shall not, however, discuss the works of individual living writers. I do not doubt they would agree with me that the subject has not yet been adequately treated.

With a view to help toward a more effective study of mediæval architecture than has hitherto prevailed, I propose here to offer some suggestions under the following heads : (I.) Examination of the Monuments ; (II.) The Use of Photographs ; (III.) The Use of Books.

I.

Since the architecture of the Middle Ages is that of churches primarily, it is with church edifices only that we shall be concerned.

In the study of buildings it is important to work systematically, and to give our first attention to forms of construction, since these constitute the basis of design and fundamentally differentiate architectural styles. But we should bear in mind that in architecture construction is in the service of the artistic imagination, and that the architect, in planning a building and determining its forms of support and enclosure, has regard at every step to the gratification of the eye.

In examining a church edifice of the Middle Ages we should first observe to which of the numerous types of mediæval building it belongs. We should notice broadly whether it be Romanesque or Gothic. If it be Romanesque we must observe how far it retains the basilican character—i.e., how far it consists of plain walls, continuous arcades, and timber roofs ; how far basilican forms be modified by features derived from the Byzantine source—as where some sort of dome on hemispherical piers is placed at the crossing ; or how far it is essentially Byzantine throughout—i.e., whether the system consists mainly of domes on pendentives ; or, finally, how far it has the organic vaulted character that developed into Gothic. If it have any Gothic features—i.e., if it have vaulting on groin ribs, with the pointed arch prevailing over the round arch, we should observe how far the vaulting departs in its conformation from the ancient Roman form, whether there be a logical system of supports, and whether the external system is consistently related to that of the interior, so that the vault thrusts are effectively met by abutments. The measure of true Gothic character, as to construction, that a building may have will depend on the degree in which the ribs of the vaulting are formed and adjusted so as to shape the vaults for effective concentration of thrust, on the completeness, consistency, and economy with which the piers provide support for every rib and archivolt, and on the effectiveness with which the buttress system meets the exigencies of thrusts—so that a stable equilibrium is established and maintained in the whole system.

It will generally be found that a church of the Middle Ages will not be all of the same character. The different parts may be in as many different styles, for in the Middle Ages additions, rebuildings and alterations, whether of large or small parts, were carried out in the style that prevailed when the work was done, with no regard to uniformity with the earlier parts. Normally the eastern part would be the earlier, since it was the custom to begin a church at the east end in order that the choir and sanctuary might be available for use while the western parts were building. If there was long delay before the other parts were begun, the style of building would have changed, and the new part would differ correspondingly from the old. But, as it often happened that an early east end was demolished and replaced by a new one at a time considerably subsequent to that of the original construction, we may often find the east end to be in a later style than that of the nave. Even in the rare cases where a whole church was built at one time, and thus in one style, it will hardly have escaped alterations, or interpolations, in later styles. All such differences of style in a given building should be noted in our preliminary survey.

It may here be remarked that in the vaulted architecture of the twelfth century in the Ile de France two types of elevation occur—namely, that in which a vaulted gallery covers the lower aisle, as at Noyon and Paris, and that in which only a narrow passage over the ground story arcade occurs at this level, as at St. Leu d'Esserent. It is common to call the first a triforium gallery, because it occupies the place usually taken by the triforium, which is properly the space between the aisle vaulting and the timber roof that covers it. Where such a gallery occurs the true triforium is lifted to a higher level, and the building is in four stages internally instead of only three. But the triforium when thus lifted is not always expressed by an arcaded passage. The French triforium passage, it should be noted, is shut off from the triforium space by a screen wall. The vaulted gallery is, of course, a survival of the tribune gallery of one type of Christian Roman basilica.

Having completed our preliminary observations, we may begin a rigorous examination. It will usually be found that, although the nave and choir may not be alike in architectural character, each will be substantially of the same general design throughout.

Suppose we take a twelfth-century vaulted church of the Ile de France. Since in logical vaulted architecture the vaulting determines the structural composition of all other parts, we must begin with the vaults, as the builders themselves necessarily did; for in order to dispose and shape the supports suitably they must have settled in their minds the form of the vaulting. In the Ile de France, from about the middle of the twelfth century, both the quadripartite and the sexpartite forms of vaulting occur contemporaneously, but with many variations of conformation of which we need to take note.

We should first examine the rib system, because, as already remarked, it primarily shapes the vault and commands the composition of the supports. Observe whether the ribs are all pointed, and, if they are not, notice which of them retain the round form, and which, if any, are stilted. Look whether their crowns are all on the same level, or whether the groin ribs reach higher than the others, making the vault domical.* Note in what manner the longitudinal ribs are stilted—whether by shafts rising from the pavement or by shafts starting from higher levels—and whether the transverse and groin ribs start free at the impost or whether they interpenetrate. In sexpartite vaulting notice whether the intermediate transverse rib be pointed in order to reach the point of intersection of the groin ribs or whether it be a stilted round arch. Observe, in each vault cell, whether the surfaces be concave in all directions or whether they approach in any part a cylindrical form; and in the lateral cells note the degree in which the surfaces are warped, or plowshared, in consequence of the tilting of the longitudinal rib. In order to determine the conformation with any exactness it will be necessary to examine the upper surface of the vault. By taking levels here the form may be fully made out where it can be reached, but the lower parts will be inaccessible, since from the springing up to the haunch there will be a solid filling. Then observe the vault masonry. Note whether it be measurably regular or composed of stones roughly cut and of varied size and shape; whether the courses incline more or less, especially near the springing, and in what direction they incline, *i.e.*, whether from the springing upward toward the groin ribs or the reverse. Note, too, where the surfaces are distinctly concave, how far the courses are noticeably gore-shaped.

We have next to examine the system of supports. Observe the form of the great pier—whether it be compound from the pavement, with a shaft for each rib in the vaulting, or whether, on the ground storey, it be a single column with the vaulting shafts gathered on its capital, or whether the main shafts rise from the pavement, while the others start from higher levels. Look whether the shafts are in long monolithic sections or are built up of small stones; and note whether they vary in magnitude in agreement with the magnitudes of the ribs they respectively carry. Where the piers of the apse are, on the

* The term domical, as applied to Romanesque and Gothic vaulting, does not appear to be always correctly understood. It means only that the crowns of the groin arches are higher

than those of the other arches of the vault. It does not mean that the vault has any approach to the form of a hemispherical dome, or any derivation from such a dome.

ground storey, single columns, notice whether they are monolithic or are built up of drums, and in comparing the piers and shafts of different buildings observe how far those that are monolithic tend to have smaller proportionate diameter than those that are composed of drums or of small stones.

Where the building has a triforium passage, the pier will, of course, be pierced, as at Meaux; but where the vaulted gallery occurs, as at Paris, it will naturally remain solid.

Observe whether the capitals and bases of the shafts supporting the groin ribs are set obliquely, in conformity with the directions of those ribs,* and note the profiling of the vault ribs and archivolts. Note also the forms of the bases and capitals, including the profilings of the base mouldings and the abaci of the capitals.

Observe whether the clerestory and aisle openings are pointed, and whether they fill the spaces between the piers. Observe, too, whether they are in single or double lights, and where they are double note the mullion section. Note, also, how the tympanum is formed, *i.e.*, whether it have a circular piercing, and whether there be cusping to the circle.

Of the external system, examine the pier buttress, *i.e.*, the buttress incorporated with the pier above the aisle vaulting, which rises through the aisle roof. Find whether this buttress overhangs the ground storey pier. This will be ascertained by measuring the diameter of the pier on the ground storey, and again from the aisle roof, where it will include the buttress. Find also whether this buttress be reinforced by an arch, springing from the outer buttress, beneath the aisle roof; and how, and at what level, the flying buttress, if there be one, is adjusted to it, and whether the flying buttress be single or consist of two superimposed arches. Then notice the form of the great outer buttress, whether it have many or few set-offs, how high it rises above the aisle roof, how it is shaped at the top, at what level the flying buttress springs from it, and at what level this last meets the pier buttress.† Notice, also, how the sloping back of the flying buttress is treated, whether it be gabled or flat. Look if the clerestory have any sort of parapet, or whether, on the other hand, the roof is brought over the cornice.

To gain a complete understanding of an architectural system there is no means so good as that of drawing. More may be learned about Gothic construction by working out a cross section than by any other means. A cross section shows at once the internal and the external system and their relation to each other. In working out such a section all parts that can be reached must be measured. Parts that are inaccessible will have to be measured by eye with reference to those that have been measured mechanically. It will be well to make a free-hand drawing of the whole system by eye, guided by the imagination as to how a section would look. On this drawing every measurement may be set down as it is taken. The section may then be readily worked out to scale from these data.

In measuring it will be well to use the metric system, since this is universal on the Continent, and uniformity is desirable.

Exact measurements will not be always possible, but small inaccuracies are immaterial. A slight error in the height of a vault will be no great matter. For horizontal measurements a steel tape is best; for lesser heights a pole, or a jointed fishing rod, will be useful; while for greater altitudes a plumb line will serve, where a point from which to drop it can be reached. In high vaulting a hole will nearly always be found at the crown of each compartment through which the line may be let down. The thickness of the vault can hardly be measured with precision, for the groin ribs and the boss will be added to the thickness at this point, and there will be no means of finding their salience beneath the vault surface. But the thickness of all together may be found with enough correctness by

* In the French Gothic art of the twelfth century the abacus of the capital is normally square on plan, and the capitals of the shafts supporting the groin ribs are in most cases set obliquely.

† The height to which the head of the flying buttress is carried in relation to the springing of the vault differs greatly. In the developed Gothic the upper arch (where there are two) meets the pier buttress at the level of the crown of the vault.

measuring on a rod thrust through the hole with its lower end reaching, as nearly as can be determined, to the bottom of the boss.

The level of the springing of the vault must be taken by eye with reference to that of the clerestory string. But the level of this string can hardly be got with precision, since a French clerestory has no passage on the inside to give access. It may, however, be found with some approach to correctness by measuring the height of the triforium arcade from the triforium string—which can always be reached—and taking the proportionate height above this arcade by looking across from the opposite triforium. The level of the triforium string itself can be measured with the plumb line. If it be too far below the ledge to be conveniently reached by the hand, the height of the ledge may be measured with the line, and the depth of the string below it measured on a rod and subtracted.* Unless the building be very large, the height of the ground storey pier may be taken with a long rod. Where it is too tall to reach with a rod it may be measured by eye with reference to the height of the triforium string, which we have already measured with the plumb line. The crown of the arch of the great arcade must also be taken by eye.

The profiles of members that can be reached may be measured with exactness by taking offsets, at measured intervals, from a straight-edge.

We come now to the apse and the west front. In examining the apse we must observe the arrangement of the ribs of the vault. Notice whether they meet on the crown of the easternmost transverse rib of the choir vault or whether the point on which they converge is eastward of this, so that a pair of ribs spring from the easternmost piers of the choir and abut them. If they meet on the crown of the easternmost transverse rib, notice whether this crown be, on plan, at the centre of the curve on which the apse is set out, or whether it be west of the centre. In other words, find whether the apse be, on plan, a half circle or an arc of more than half a circle. If it be more than half a circle, then the ribs of the vault converging on the transverse choir rib will, of course, be of unequal length, as in the Cathedral of Paris.

Observe the form of the easternmost compartment of the choir vaulting. If it be quadripartite, then of course its groin ribs, intersecting in the centre of the compartment, will afford no abutment to the ribs of the apse vault, as in St. Germer de Fly; but if the groin ribs spring from the western piers of the compartment and meet on the crown of the easternmost transverse rib, making the vault tripartite, then the ribs of the apse vault will be effectively abutted, as in the Cathedral of Noyon. Where the choir vaulting is sexpartite the compartments will be so arranged that a half compartment will adjoin the apse, and thus its groin ribs will naturally meet those of the apse vault, as in the Cathedral of Paris. This half of the sexpartite vault will be, of course, precisely like the tripartite vault that adjoins the apse of Noyon; but there it forms no part of a sexpartite system, the choir vaulting of Noyon being quadripartite.

The converging of the ribs of the apse vault on the transverse rib of the choir vault will be found in early buildings only. In the more developed Gothic of the twelfth century the vault of the apse is made independent of the choir by having its ribs converge on the centre of the curve of the apse set eastward of the choir vault, with the additional pair of ribs sprung from the choir piers to give abutment, as described just above. In this case the apse will be set out on an arc of more than half a circle, and the ribs, being on plan radii of the circle, will be of equal length, as at Amiens. Another point to notice in the apse vault is the height of the ribs in the periphery corresponding to the longitudinal ribs of the rectangular vaults of the nave. Observe whether the crowns of these ribs are on the same level with the point of intersection of the groin ribs or are above or below that point. If they are lower the vault will be more or less domical. It will, however, be found that the vaults of French apses are rarely domical.

The apse of the twelfth century in the Ile de France is generally semicircular, or segmental, on

* One must be careful in making high measurements from unprotected places. A fall from the triforium might be fatal.

plan ; but in the fully developed Gothic it becomes polygonal. In some instances it was begun in the earlier form and changed, as the work proceeded, into a polygon. Thus at Chartres and at Reims the basement of the apse is semicircular and the superstructure polygonal. All such points should be carefully observed.

In the vaulting of the apsidal aisle observe whether the groin ribs be curved on plan. If not curved, notice whether they are in straight lines from end to end, *i.e.*, whether the whole rib is in one vertical plane, or whether its two parts lie in different planes meeting at an angle. Notice also whether the point of intersection of the groins be, on plan, midway between the inner and the outer sides of the aisle or whether it be nearer one side than the other. If the groins be straight on plan from end to end, the point of intersection will, of course, be nearer the inner side, more or less according to the proportions of the trapezoidal plan. But it will be found that the groin straight on plan from end to end is rare, and occurs in very early apsidal aisle vaults only, as at Pontoise, but where the groins are, on plan, each broken to an angle the point at which they intersect may be anywhere, and is sometimes nearer the wall side of the compartment, as at Sens. Observe, too, whether any of these ribs interpenetrate at the springing, and whether any of them are stilted. The arches opening into the apse, being on the narrow side of the trapezoid, will in most cases be very much stilted, since without stilting, or acute pointing, their crowns would be low, and would make the crown of the vault slope correspondingly. Note, too, whether these vaults are domical, and whether their surfaces are concave. Note the forms of the aisle responds, and observe how their capitals and bases are set with reference to the ribs of the vaults. Notice here, too, the profilings of ribs, archivolts, capitals, and bases ; and look whether the plinths and abaci are shaped on plan so as to conform with the curve of the apse, or whether they be straight on the inner and outer sides.

Where chapels open out of the apsidal aisle, look whether an arch separates each chapel from the adjoining aisle compartment, or whether both chapel and aisle compartment are embraced by a single vault. If there be a dividing arch, making the vault of the chapel independent of that of the aisle, observe the arrangement of the ribs of the chapel vault, as in the case of the vault of the great apse. If one vault cover both parts, notice how the combined rib system is composed.

Examine the outside of the apse, with its aisle and chapels, as in the case of the nave.

A transept being merely a transverse nave will exhibit no peculiar features, though in some of the earlier French churches, as Noyon and Paris, the transept has no aisles, and in some of them one or both ends are apsidal, as at Noyon and Soissons.

Unless the church be very early, the west front will not be of twelfth-century design and construction. In examining it observe first the general relationship of the larger parts to those of the interior. Look if the main vertical divisions answer to those of the nave and aisles, and if the horizontal divisions correspond to those of the ground storey, the triforium, and the clerestory. Notice whether the middle compartment have a gable answering to that of the timber roof over the vaulting or whether it be crowned with a horizontal cornice. If there be a circular opening in the upper stage of this compartment, notice if its diameter be equal to the whole space between the tower buttresses, and look inside the nave to find whether the westernmost transverse rib of the vaulting be semicircular, so as to form the upper half of this opening. Observe whether the pointed arch prevails in all other openings of the front ; and where, in a twelfth-century front, the round arch is retained in some of them, observe whether it is so on both sides alike. The halting procedure of the primitive Gothic builders gave rise to many curious combinations of round and pointed arches in west fronts.

It is worthy of notice that the fine logic of the main system not seldom gives place to many violations of logic in the west front, which was nearly always designed and built after the finer Gothic inspiration was spent.

Where a vaulted church is in a state of ruin some things may be seen that are hidden from view when the building is intact, as the manner in which the vault masonry is laid on the ribs, the way in

which the masonry of the piers is disposed internally, how the engaged shafts are bonded, or keyed, into them, the masonry construction of the great imposts, and whether, and to what extent, metal cramps are employed in any parts. Where a portion of a nave is demolished we may sometimes find a nearly complete cross section exposed, so as to show the whole internal and external systems in their relation to each other. All such opportunities to examine the anatomy of a Gothic structure should be taken advantage of.

I have already spoken of the remarkable logic of Gothic design and construction as that of the artistic imagination, and not of mechanical science. In this the work of the great age of French Gothic art differs notably from that of the later Middle Ages. As Viollet-le-Duc has said, even the Gothic of the later thirteenth century "*se réduit souvent à des formules qui tiennent plus de la science que de l'inspiration.*"*

The finer qualities of Gothic architecture have as yet been too little appreciated, because there has been too little discrimination between the pure Gothic art in its early integrity and the many corruptions and travesties of it that are met with in all parts of Europe. Just as the discerning student of ancient Greek art finds its finest qualities embodied in that of Athens in the Phidian age, so the discriminating student of mediæval art will find its purest and best manifestation in that of the Ile de France in the twelfth century.

For a just appreciation of the character and beauty of the pure Gothic style there is no means so good as the habit of faithful free-hand drawing. The student should never be without his pencil. Careful delineation opens the eyes. Especially is this true with regard to architectural sculpture. In proportion as the draughtsman has learned, through drawing from nature, to discern the living beauties of leaf and stem, as well as of the human and animal forms, will he be able to appreciate the vital quality so wonderfully imparted to the stone of the Gothic carver. No amount of photographing will have the same effect on him. As records of facts photographs are of great value, but the use of the camera does little to quicken the sensibilities of the operative.

The discerning student will, I think, find that the finest French Gothic comes practically to an end with the first quarter of the thirteenth century, though after this time, by virtue of what still survived of the earlier spirit, many great works were produced, as the choir of Amiens and the nave of Reims. In examining the later monuments, various superficial changes will be met with, but no important structural developments. The Gothic system reached its fullest structural perfection in the nave of Amiens, begun in 1220. Subsequent changes consisted in exaggerations and complications that tended to destroy the monumental temperance and refined beauty of the early Gothic art. The multiplication of ribs in the vault of the crossing of Amiens, the lighting of the triforium of the choir of the same church, and the excessive attenuation of supports in St. Urbain of Troyes, are early instances of such changes on the structural side; while ornamental changes consisted first in the multiplication of mouldings, needless complications of tracery, unrestrained profusion, and over-naturalism of carving; while, finally, capricious interpenetrations and sinuosities of mouldings and tracery, loss of vitality in foliation, extravagance of posture in figure sculpture, and general unquietness of design mark the last stages of decline. How far the student will care to follow these phases of the art will depend on his temperament, his æsthetic feeling, and his experience of the best. In so far as he appreciates the real character of the pure Gothic style, he will be quick to perceive the first departures from those principles of straightforward and logical composition on which it is based. He will find that such departures begin early, more particularly outside of the Ile de France. In the choir of Rouen, for instance, dating from the early part of the thirteenth century, a remarkable foreshadowing of Flamboyant interpenetration occurs. This will be seen in the illustration (Fig. 1) showing the great arcade of the south side of this choir where, in the impost of the second pier, the small roll on the first order of the great archivolt is carried through the lateral roll of the groin rib

* *Dictionnaire Raisoné de l'Architecture Française*, s.v. "Cathédrale," p. 339.

of the aisle vault, and brought down to the capital in true Flamboyant fashion.* It will be seen, too, that a part of this archivolt dies away, just above the springing, on the face of the great round column—which is carried up through the impost—in the manner that also became characteristic of Flamboyant work. This appears in every impost of the straight part, on both choir and aisle sides. It is clearly marked on the choir side in the impost seen on the left-hand side of the illustration.

In the study of the monuments the student should be on his guard against mistaking what is miscalled restoration for original work. The extent to which great works of the past have been



Fig. 1. SOUTH SIDE OF CHOIR, ROUEN CATHEDRAL.

destroyed in the name of restoration is appalling. What mediæval churches have suffered from other forms of violence, or from decay, hardly exceeds, if indeed it equals, what has been lost at the hands of the restorer. The idea of restoration involves two fallacies—namely, the notion that proper upkeep of old churches requires that they should always be spick-and-span for modern uses, and the belief that damaged old work can be restored. But the usefulness of an old building does not depend on its looking like new, and to put new work in the place of old is not to restore, but to corrupt. To

* * M. Enlart, in his *Origine Anglaise du Style Flamboyant*, Caen, 1906, finds the first instance of such interpenetration in the Church of St. Mary of Beverley, dating from the fourteenth century; but an examination of the earlier pointed archi-

ture of Normandy might show, I think, that they had—like so many other things in the mediæval architecture of England—their beginnings in Normandy.

the student of art a restored building is a corrupt document. The guardians of ancient churches have not been faithful to their trust, and modern architects have been too ready to engage in works of rehabilitation, often involving ruthless demolition. In the case of the Cathedral of Paris, for instance, the student who should undertake an examination of it, as an expression of the French genius of the twelfth century, would need to exercise great care to distinguish later alterations and modern restorations from original work. The building is now, in superficial appearance, so complete and homogeneous that the casual observer would not suspect that it has not always been as we now see it. It has, however, not only undergone extensive alterations since the main body was completed in the twelfth century, but a large part of the sculptured enrichment of the west front—first completed in the early years of the thirteenth century—is now modern counterfeit. This is deplorable. Repair of ancient buildings is justified only where there is danger of collapse, and then only works of consolidation ought to be allowed. With carved ornament there is never any justification for replacing old work with new. The least fragment of carving ought to be preserved, and where none remains nothing should be done. This is now well understood with regard to ancient sculpture. Nobody of intelligence would think of attempting to restore the sculptures of the Parthenon.

Before leaving the subject of the study of the monuments a word must be said about chronology. While in most cases the dates of mediæval monuments are now, beyond doubt, determined with approximate correctness, no precise chronology is possible, for in most cases no clear records of dates are available. A statement in a mediæval document that a certain abbot or bishop, in a given year, founded a church, or that on a given date any part of it was completed or consecrated, is in itself no evidence of date, for we have no means of determining that the building we now see is the one to which the document refers; since the church may have been demolished and rebuilt more than once since the document was written. Such a document is therefore of little value unless we have some means of identifying the existing building as that to which the writing refers. Happily in several cases we have such means,* and there are enough instances of fairly well established dates for the French monuments to enable us, by the help of the comparative method, to form a fairly correct working chronology.

II.

As for the use of photographs it may almost be said that through them the comparative study of architecture has become for the first time possible, since photographs can be brought together for close comparison, and in unlimited numbers, as buildings themselves cannot. A photograph is an authentic document. If we have enough photographs of a given monument, taken from properly chosen points of view, and including details of both structure and ornament, we may learn almost as much from them as we should from an examination of the building itself.

A series of photographs that would explain the system of a Gothic building, such as we have considered, would have to show at least the following parts: A general view of the interior on, or near, the main axis; a view of the whole internal system of one side of the nave, of the choir, and of the transept; a view of one compartment of the vaulting taken from the pavement; a full view of the clerestory and triforium, from the opposite triforium; a full view of one bay of the ground storey up to, and including, the triforium string, taken from the opposite aisle; a view of the triforium passage, taken on its long axis; a view of the ground storey aisle on its long axis; an oblique view of the wall side of the aisle; a full view of one compartment of the aisle vaulting. Then we require some details on a larger scale than they come in the general views, as follows: The base of the great pier; the base of the aisle respond; the pier capital, including the whole impost: (1) from the nave side, and (2) from the side of the aisle; the capitals and bases of the aisle responds. In *sixpartite*

* Notably in the cases of St. Denis and Canterbury, where the written records include enough detailed description of what is mentioned to make it possible to identify the existing work.

systems we require details of both main and intermediate piers, and where the details of piers, bases and capitals differ one from another we need photographs of all.

Of the apse, in addition to a general view, we must have a view of the vault, including the adjoining compartment of the choir vault, looking straight up. We need also details of the ground storey, the triforium and the clerestory, as in the case of the nave. We must also have a view of the apsidal aisle, a view of one compartment of the vaulting of this aisle, looking straight up, and where the vaults differ one from another—as they sometimes do—we should have a photograph of each.

Of the exterior, in addition to a general lengthwise view, and a full view of the east and west ends and transept ends respectively, we should have a view of the buttress system, from the roof of the aisle, or from one of the western towers, and a view of the outer buttresses taken from the ground.

Of sculptured enrichment, of all parts, we cannot have too many photographs, both of larger groups and of their details.

While from such photographs a pretty full understanding of a given monument may be had, there are nevertheless some things that we cannot learn from them, as, for instance, the exact forms of the great piers in horizontal section, particularly the relations of the transverse and longitudinal diameters, which may have important structural significance. In the choir of Beauvais, for instance, the pier has an oval section, with its long axis perpendicular to that of the building, materially stiffening it in the direction of the vault thrusts. There are also many irregularities of dimensions of plan and elevation, in almost all parts of a mediæval structure, of which we get no idea from a photograph. But apart from direct study on the spot photographs afford the only information on which reliance can always be placed.

III.

In the use of books the novice student should be warned that complete reliance can rarely be placed on them. As I have already said, those that are even fairly trustworthy are very limited in number. In most cases only general notions at best can be got from them. Of a building as a whole, account is commonly taken of general conformation only, save for details of secondary importance. Of essential structural character we seldom get clear, correct, and full information. Take, for example, the well-known work of De Caumont, the *Abécédaire d'Archéologie*, published early in the last century—one of the best-intentioned and most painstaking works, and one on which most of the subsequent English books on mediæval architecture have been modelled. It is hardly too much to say that nine-tenths of this book is taken up with ornamental details, and that none of the types of building mentioned are adequately described as to their fundamental characteristics.

It ought not to be necessary to say that the first thing to be considered in the study of a given monument of architecture is its structural system as a whole. Every æsthetic quality depends on this, and every ornamental feature is conditioned by it. But a structural system can be understood and correctly described only from first-hand examination. Too many books have been made up from other books, and the errors and personal preferences of one writer are too often repeated by others.

A student of actual monuments will soon discover that the architecture of the text-books is often very different from the architecture itself. Books are not seldom incorrect in most important particulars. For instance, most writers on the architecture of the Italian Renaissance speak of the vault of the Pazzi Chapel in Florence as a dome, but it is in reality a mediæval vault of Gothic character, since it consists of deep cells supported on ribs. Its thrusts are thus concentrated on points in the circular drum within which it is enclosed, whereas a dome is an unbroken hemisphere exerting equal thrusts on all points in the circle.* Again, on comparing, some time ago, three German monographs on the Cistercian church of Fontenay, I found the conformation of the vaulting given in as many different ways. Such disagreement of authorities, on plain matters of fact, shows the lack of care in

* That the vault of the Pazzi is a Gothic vault I have shown with illustrations in my *Character of Renaissance Architecture* (New York and London, The Macmillan Company), pp. 27, 28.

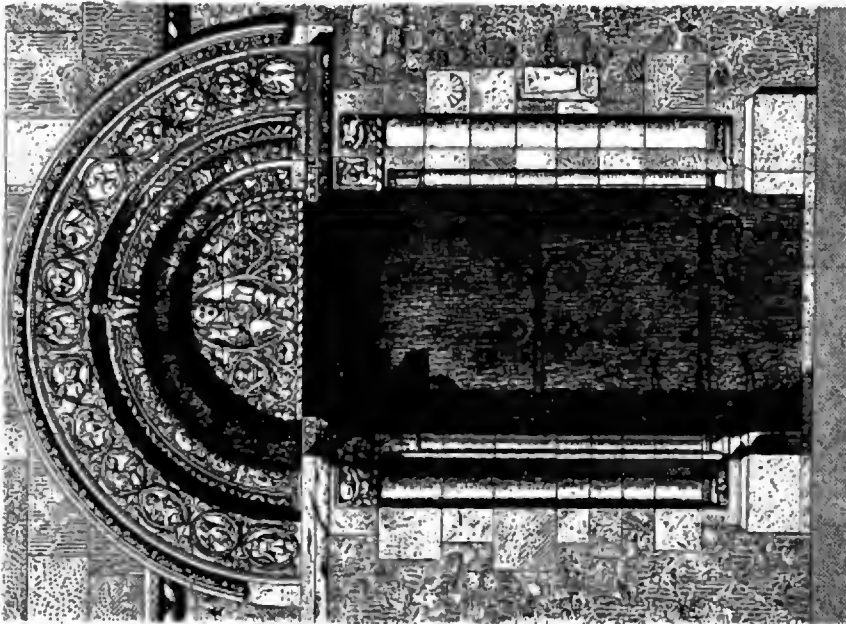


FIG. 2. DOORWAY, BARFRESTONE CHURCH.
From Ruprich-Robert's *L'architecture Normande*.

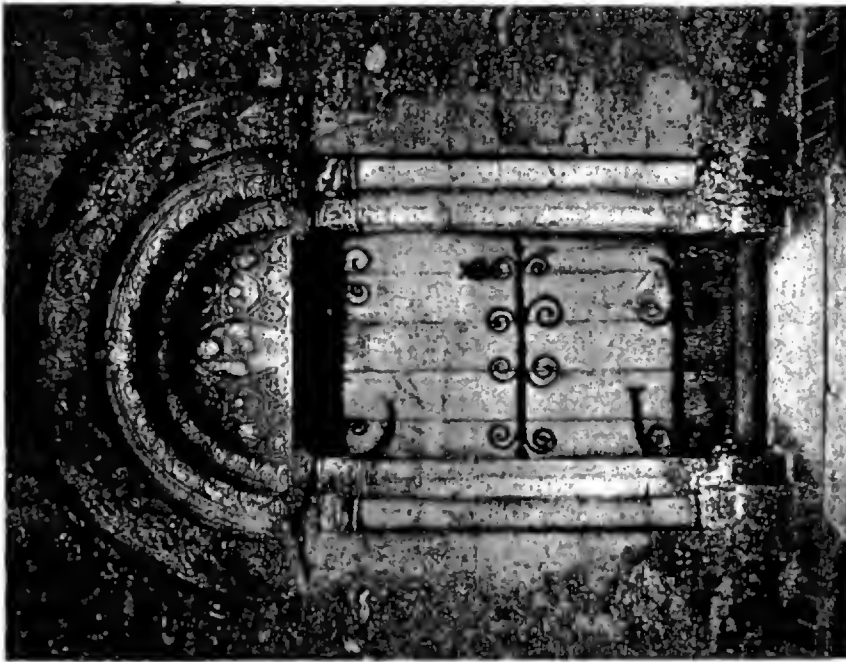


FIG. 3. DOORWAY, BARFRESTONE CHURCH.
From a recent photograph.

observation and description that has too widely prevailed. Even the most competent writers are sometimes careless as to points that may be of great importance. Thus Viollet-le-Duc, in the plan of Reims Cathedral, given on page 816 of the article *Cathédrale*, represents the easternmost choir vault as quadripartite, while in reality it is tripartite, with its groin ribs meeting on the point where those of the apse converge—as at Noyon—an arrangement, as we have seen, of great significance. On the same plan the apsidal chapels are each figured as having a rectangular quadripartite vault interposed between the apsidal vault and the vault of the aisle; but in the two plans of one of these chapels (showing the form at different levels), given to a larger scale on pages 470 and 471, it is represented, I believe correctly, as having a single octopartite vault, with its ribs all converging on the centre of the curve on which the chapel is set out.

And not only do illustrations to even good books in too many cases thus misrepresent important structural features; they also, almost invariably, falsify workmanship. The workmanship of the Middle Ages never has the mechanical character commonly shown in book illustrations. As an



Fig. 4. BASE OF PIER, AMIENS CATHEDRAL.

example of very common misrepresentation we may take (Fig. 2) a reproduction of a print given in M. Ruprich-Robert's important work, *L'Architecture Normande*, representing a doorway of the small Church of Barfreestone in Kent. Observe the perfectly squared masonry of the jambs and the mechanical precision of all the details—shafts, capitals, and sculptured archivolt. Then compare a photograph (Fig. 3) of the thing itself. Observe the noble rudeness and irregularity of the masonry. I say *noble* rudeness, because it is a rudeness natural to free-hand workmanship. Such work has a human expression, and a picturesque charm, of which we get no idea from the mechanically wrought engraving. It is a pity that so much toil of metal cutting should be put into such elaborate misrepresentation, and that prints like this should be so extensively used in books on architecture.

The mark of free-hand execution is constant in the art of the Middle Ages, and we find it in the greatest monuments no less than in those of humbler sort. The mouldings of the bases of the great piers of the nave of Amiens (Fig. 4), for instance, show irregular swellings and depressions of surface, which, though slight, give a human vitality. The same character is marked in the headpiece to this paper, showing a group of capitals from one of the western portals of Rouen Cathedral. It will be seen in this example that the lines of the abacus mouldings are not parallel, and that they are very

rudely mitred. The flat face of the lower member of the middle one, on the left side, has its lower edge noticeably curved upward, so that it is wider at the mitre joint, and at the salient angle, than in the middle. The neck mouldings show the same irregularities, the one on the left being the most marked in this respect, with its left side considerably thicker, and more salient, than the right. Irregularities are everywhere noticeable in the foliate carving too, and these are delightfully expressive both of the sculptor's free-hand and of the subtle inequalities of the natural leaf forms from which the ornamental motives are derived. Though the scheme of composition is symmetrical, no group or detail is precisely so. Rigid symmetries of design are never found either in nature or in the work of the mediæval carver. An instructive comparison between mediæval and modern workmanship is afforded in the flat surfaces seen in this illustration. Those of the jambs to the left and between the shafts are of the twelfth century, while the portion of buttress seen on the extreme right is a bit of modern restoration. The uniform mechanical character of this surface is in marked contrast with the pleasantly varied surface naturally given by the free chiselling of the old work, while the hard lines of the evenly cemented joints of the modern workman—in effect like the lines of a ruling pen—are painful to the eye.

A few examples with measurements will serve to show more exactly the nature of mediæval irregularities of design and construction. In the capital (Fig. 5) from the triforium of Christchurch, Hants, it will be seen that the end of the abacus to the right falls 2 centimetres below the level of the other end, and that this abacus is half a centimetre thicker on the right side than on the left. The neck moulding here, as at Rouen, is of unequal thickness in different parts, measuring $4\frac{1}{2}$ centimetres on one side and only $3\frac{1}{2}$ on the other; while the bell overhangs the face of the shaft on one side and falls within it on the other. The plan (Fig. 6) of the whole opening, drawn to a smaller scale, in which this capital occurs is equally irregular, both in the dimensions of its parts—those on one side not agreeing with the corresponding ones on the other—and in the shaping of them, few of the members being square.

Similar irregularities occur, to a greater or less extent, throughout the entire system of every mediæval monument, and they are often astonishing in extent.* I have given in my *Development and Character of Gothic Architecture* (Fig. 38, page 93) an elevation of one bay of the sexpartite system of the choir of Senlis. A glance at this will show some very marked irregularities. It will be seen that in the triforium gallery the intermediate pier falls considerably to one side of the centre of the double bay, its axis not coinciding with that of the supporting column, so that the vaulting shafts, rising from this column, divide its surface very unequally, and the openings on either side are thereby made unequal in width; while lesser irregularities are noticeable in every part.†

Irregularities are often conspicuous in the great cathedral fronts—in that of Paris, for example, the north tower is wider than the south one—but the crown of the archivolt of the doorway falls lower than that of the south tower, and this archivolt is surmounted by a gabled moulding which has no counterpart on the other side.

These irregularities, so inherent in the free-hand execution of mediæval building, have not been enough observed and set forth in books on this art. The sketchy picturesque illustrations sometimes given in books do not express them truly. Even the work of Prout, though of unequalled pictorial

* A series of articles by Mr. W. H. Goodyear, published in *The Architectural Record* during the nineties of last century, gives many striking examples of such irregularities, in both plan and elevation. Mr. Goodyear has done a good work in examining and illustrating these irregularities so extensively. He has done it with great thoroughness, and the results would in some cases appear incredible were the measurements not given. But Mr. Goodyear's conclusions from the facts he has so carefully observed do not appear to me justified. He thinks that many of these irregularities were intentional, and calls them architectural refinements. One can, however, see no reason for intention, and they cannot be properly called

refinements. The systematic and very subtle curves and convergences that have been observed in some ancient monuments—as in the Parthenon—are very different. They are consistent, and so slight as to be almost imperceptible, and may indeed be called refinements. But the erratic and irregular bends, leans and skewings of mediæval building are, I think, for the most part the result of free-hand execution on the one hand and of the thrusts and settlements of time on the other.

† This mechanically drawn illustration gives, of course, no indication of such irregularities of minor details as those just noticed in the triforium of Christchurch.

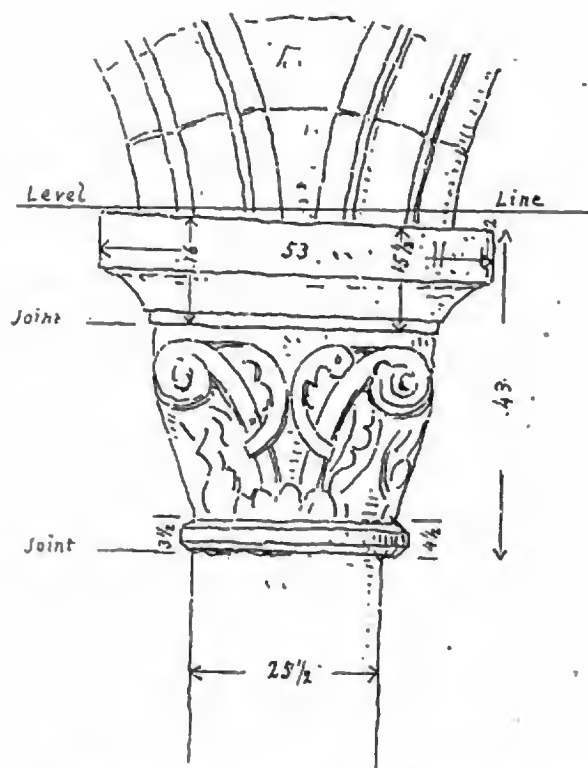


Fig. 5. CAPITAL, TRIPORIUM, CHRISTCHURCH, HANTS.

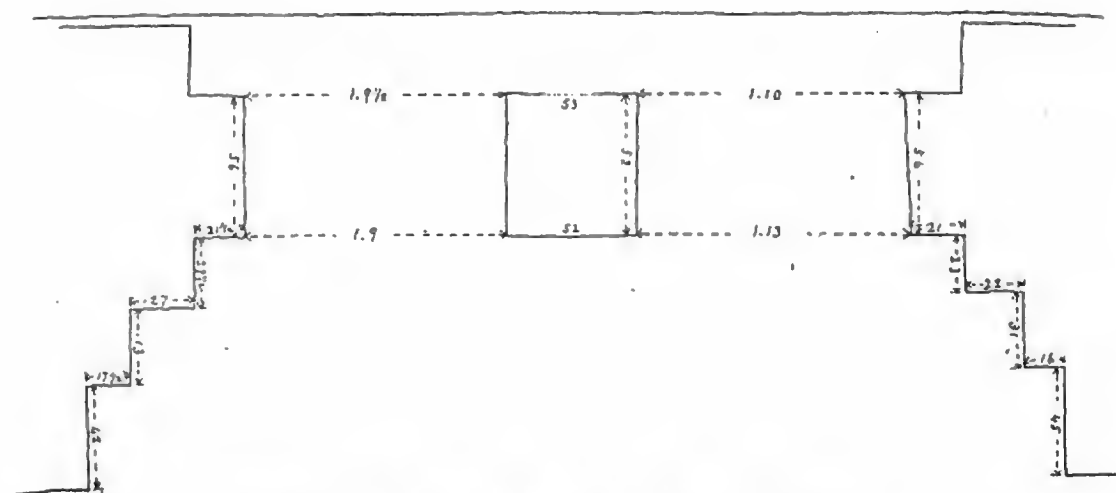


Fig. 6. PLAN OF TRIPORIUM OPENING, CHRISTCHURCH, HANTS.

excellence, is of no value to the student of architecture ; since it is picturesqueness, and not architectural character, that mainly interests Prout. There is no reason, however, why illustrations of architecture should not show picturesque feeling, and at the same time convey true information, like the remarkable soft-ground etchings by Ruskin in the first edition of *The Seven Lamps of Architecture*. As to book illustrations of architectural sculpture, only process reproductions of photographs are entirely trustworthy ; for, however skilful and conscientious a draughtsman may be, his personal feeling will more or less modify the conventions and archaisms of the mediæval carver.

The primary value of the study of mediæval architecture lies in the fact that it represents a great phase of human activity. The study of this art is the study of man in the exercise of some of his higher emotional and imaginative faculties. From this point of view it should appeal to all men of feeling and intelligence. As a discipline for the practising architect it is of great importance ; but, like the study of all other art of the past, it is for discipline and inspiration only that it can be of use to the modern practitioner. Mediæval architecture is not to be copied. True art is always an outgrowth of prevailing conditions, and conditions are ever changing. Creative workmen in the past have designed in the current styles of their times and localities, and, while borrowing freely from whatever has stirred their imagination and was suited to their needs, they have never based their practice on archæological study. Builders naturally, in proportion to their inventive powers, modify more or less creatively what they derive from foreign sources, and creative changes gradually transform living styles of architecture ; but the discerning student will discover that changes in mediæval architecture were not always of a creative kind, and that he will need to discriminate. He must constantly exercise a critical spirit, and his critical judgments, in respect to structure, must be based on reason and comparison. Common sense will teach him that irrational combinations are incompatible with creative design, and he will be safe in taking structural logic as a primary test of progressive art. On the æsthetic side the grounds of judgment are not so simple, for the quality of beauty involves spiritual principles that elude complete analysis. The sense of beauty lies in the domain of feeling, rather than of reason, and apprehensions of beauty are qualified by temperament and experience ; but common perception will, I think, teach that beauty is incompatible with what is false, and that truth is its necessary concomitant, if not its only criterion. But truth in architecture does not mean likeness to anything else ; it means consistency of principle, and adaptation to function in every part, whether structural or æsthetic. Even in carved ornament derived from vegetable and animal life truth does not mean verisimilitude. It means appropriate expression of abstract qualities of beauty in living things, and such expression involves conventions that fundamentally differentiate the forms of architectural ornament from those of nature, however much they may be expressive of nature.

While I have been writing the shells of German guns have been crashing into some of the noblest French monuments of the Middle Ages, and much of the world's priceless heritage of human art is gone for ever. The Cathedral of Reims will never be seen again, save as a mutilated ruin, or, what is worse, a so-called restoration. Such emulation of the spirit of ignorant savages in warfare will not add lustre to the German name.

REVIEWS.

EGYPTIAN ARCHITECTURE.

The Architecture of Ancient Egypt, a historical outline. By Edward Bell, 80. Lond. 1915. 6s. net. [G. Bell and Sons.]

This book will supply a long-felt want of a general review of Egyptian architecture. As a whole the work has been efficiently done, and is well illustrated. When a subject has been so neglected as this has, and no hand-book has appeared dealing with its various aspects, it would not be fair to expect the highest results from a compiler—however able—who has filled the empty place. As this book will certainly be a general reference book, it is desirable to point out some of the corrections that are required.

In architectural detail it should be noted that the rock-hewn temples of Nubia are only the inner shrines, in front of which there was originally a built forecourt and pylon; thus the rock excavation was a quarry for obtaining the building material. The temple system is not to be regarded as derived from the tomb (p. 101); on the contrary, the temple was the house of the god, and each part of it directly copied from the house plan, as Maspero long ago demonstrated. The temple service was likewise a direct copy of the domestic service of a great noble, as Moret has shown. The historical order of the two types of temple is overlooked; the boat-shrine temple was a temporary resting place, open fore and aft, and with a colonnade round it, as a processional way; this was the earlier type, superseded in the later times by the closed shrine and fixed statue. The use of timber houses in early times is only inferred (p. 86), while the actual house timbers have been found, and the construction ascertained in detail. (*Tarkhan* i. pl. ix.) But little is said about the pottery house-models, which illustrate all the details of domestic construction; they should be quoted from the long series in *Gizeh and Rifeh*. The earliest palm column (p. 37) is wrongly figured with a taper of 3:2; it really only tapers as 5:4. The restoration by Mariette of pyramid tombs at Abydos (p. 49) is entirely unsupported by excavation there, which showed that mastaba-shaped blocks were the real form.

The whole question of imitative forms is dealt with uncertainly. On pp. 69 and 86 the copying of wooden structures in stone is taken as obvious; yet on p. 66 objections are raised to such descent of forms. The mastaba form is quoted as an objection to a cavetto cornice being derived from structure, and it is compared to a dripstone. But the mastaba was copied from an earth and brick mound, to which no cornice would be applicable; and the cornice appears on the imitations of wooden structure, both sarcophagi and panelled false doors. The objection raised to Egyptian architecture as a whole (p. 200), that it "has a kind of barbaric luxuriance," is completely contrary to its original types, and only true of its most degraded forms. In all the early periods, its grand simplicity and stern majesty equals that of the severest Doric

style. We might as well denounce all Gothic architecture for the faults of the late Perpendicular style.

From the historical point of view the four reasons stated for an African, and therefore degraded, influence in Egyptian art, are none of them to be accepted. (1) The people of Punt were not in the least negro, but of a delicate and refined type. (2) The religion is no more fetishism than the worship of sacred trees of Northern races, or the sacred stones of Ephesos, Pessinos and Emesa. (3) The original architecture—as we have just noticed—is marked by severity, accuracy and refinement. (4) The physiognomy is of the highest European type in early times, and shows no negro traces till after the XVIIth Dynasty invasion from the south. Similarly, the faults assigned to Egyptian architecture (p. 198) are none of them to be found for two thousand years, and only belong to a decadent age. The strange dictum is given (p. 22) that the great Naqada tomb is the only royal tomb of the 1st Dynasty; the whole of the royal tombs of the Dynasty are fully published from the Abydos cemetery, and the writer seems to have been misled by an astounding piece of special pleading of Mr. Hall.

In archaeology we should note that round buildings are not by any means "in accordance with an elementary instinct" (p. 6), but result from economy of labour and material when long timber is not in use. Where timber is used, as in Polynesia, there square building is primitive. The boats painted on prehistoric vases can by no means be taken for a pylon and palisade (p. 12); as many are unquestionably boats, the rest follow suit. The worship of the sacred bull at Memphis is certainly of a much earlier stratum of the religion than the worship of the abstract god Ptah, and cannot have succeeded it (p. 18). The black granite statues on which the Hyksos kings have often inscribed their names (p. 75) are agreed on all hands to be earlier than the Hyksos, and cannot be quoted as their sculpture. The "wooden models of ships, houses, soldiers and artisans" are not later than the XIIth Dynasty, and were extinct long before the age to which they are assigned (p. 78). Enamel in jewellery is entirely unknown until Roman times; all the earlier work is of cut stone or paste, inserted by hand in cloisons.

Throughout the volume there is an unfortunate dependence on two or three popular hand-books, which necessarily contain but an incomplete view of the subject, as architecture is only one of many matters to which they refer. In the bibliography given there is not a single original account of material of the last seventy years. Second-hand statements, brief and often inaccurate, are referred to instead of the abundant original publications. This affects the handling of the subject, and prevents the book serving as a guide to the real sources for reference and study. With systematic references to the original authorities, and a revision of various oversights, this book would serve as a text-book for long to come.

W. M. FLINDERS PETRIE [*Hon. A.*].



9 CONDUIT STREET, LONDON, W., 4th December 1915.

CHRONICLE.

R.I.B.A. Record of Honour: Twentieth List.

Killed in Action.

KAY, GEORGE ALEXANDER [A.], 2nd Lieut., Sherwood Foresters, 2nd Notts & Derby Regiment. Killed in action at Hooge on 9th August.

Publication is kindly permitted of the following extracts from a letter to Mr. and Mrs. Kay, of Hilary Park, Douglas, from their son, Lieut. J. Kay, brother of the late Lieut. G. A. Kay, and of the same regiment:—"The action of the 9th August was most successful . . . and the credit for this (in his section of the line) was due in no small degree to Alec's pluck and determination. The orders were for the battalion to charge and take three lines of trenches. We bombarded these trenches for some hours, and at a signal, given by the explosion of a mine under the first trench, we were to charge and take them. Just before the signal was given Alec was slightly wounded in the head by shrapnel. He was pressed to go back to the dressing station, but insisted on remaining with his men, and had his wound tied up. Almost immediately the order to charge was given. He was about the first out of the trench, and led his men across the open through a storm of shrapnel, bombs, machine-gun and rifle fire, so intense that it was a marvel that any survived. However, in an incredibly short time the three lines of trenches were in our hands with comparatively slight losses. During the charge Alec was again slightly wounded by shrapnel on the right jaw-bone. While in the third trench he was again pressed to go back, but refused, and proceeded with the work of collecting his men and setting them to build up the trench to face the other way. After about an hour his captain again urged him to return, but he seemed determined to remain, and was quite lively. At about 8 a.m., while his servant was refixing his bandages, a rifle bullet struck him in the temple and passed clean through his head. He neither spoke nor moved again, and died a few minutes later."

Major S. Clifford Clarke, writing to the bereaved parents on behalf of Colonel H. A. R. May, C.B., the Officers, N.C.O.'s and men of the Artists' Rifles, says:—"It must be some slight consolation for you to feel that he died leading men of one of the finest regiments in the British Army; also that he will not be forgotten by his old corps: his name will live for ever in our Roll of Honour."

Lord Raglan, Governor of the Isle of Man, writes:—"The glorious death of your gallant son must always cause you both the greatest pride, and the thought of his magnificent bravery will sustain you. The country can ill afford to lose officers of his stamp, yet one knows that many must die as he did for all that we hold most sacred. May this be some consolation to you both in your affliction!"

Died of Wounds.

FROMANT: EDWARD GEORGE DAWSON [Probationer], Lance-Corporal 1st City of London Sanitary

Company R.A.M.C. Died of wounds at Ypres on 16th March, in his twenty-second year.

Mr. E. G. D. Fromant was the only son of Mr. and Mrs. H. Fromant, of Hadleigh, Suffolk. On the completion of his articles with Mr. J. W. Start, F.S.I., of Colchester, he entered the office of Messrs. Blackwell & Riddy, of Kettering, and was entrusted with an important drainage scheme at Kettering Union. He passed the R.I.B.A. Preliminary Examination in 1910 and the Professional Associateship Examination of the Surveyors' Institution. Joining the Army at the end of last year he left for the front on the 17th January with a small section in charge of Lieut. Draycott. While carrying out certain duties at Ypres on the 16th March he was wounded by a shell and died a few hours afterwards. He was interred on the ramparts at Ypres.

GIBSON, EDMUND HERBERT [A.], Lieut., Royal Naval Volunteer Reserve. Severely wounded at the Dardanelles on 23rd October, and died two days later. Aged twenty-seven.

Lieut. Gibson was the youngest son of Dr. Gibson, of Beech Grove, Harrogate. After leaving school he studied for one year in the Engineering and Art Departments of Leeds University, and for one year at the Leeds School of Art. He served his articles with Messrs. Cannon & Chorley, of Leeds, and remained with them for two years as assistant. He was afterwards in the office of Mr. Oldrid Scott, of London. In 1912 he gained *The Architect* studentship, and several of his sketches were published. In 1914, while with Mr. Scott, one of his drawings was exhibited at the Royal Academy. On the outbreak of war he joined the R.N.V.R., and in February was appointed Sub-Lieutenant, being sent down to the camp at Blandford with 160 men to prepare roads. He went to the Dardanelles in June, and was gazetted Lieutenant from the 18th October. An elder brother of the late Associate is a Captain in the 15th Battalion West Yorkshire Regiment.

Wounded and Mentioned in Dispatches.

HONAN, MATTHEW [A.], Captain, 1st South Lancs Regiment. Wounded at Gallipoli; invalided home, and attacked with enteric fever on arrival.

As reported in the last issue, Captain Honan was specially mentioned in Sir Ian Hamilton's Dispatch of the 22nd September for services at the Dardanelles.

Enlisted in H.M. Forces.

The following is the Twentieth List of Members, Licentiates and Students who have joined the Army or Navy, the total to date being 49 Fellows, 363 Associates, 188 Licentiates, and 234 Students:—

FELLOWS.

Dickson, G. A. H.: Lieut.-Col., Worcester Regt.
Dinwiddy, T. N.: Sub-Lieut., R.N.V.R.
Naylor, J. J. S.: H.A.C. (Reserve).

ASSOCIATES.

Armstrong, C. T.: Sub-Lieut., R.N.V.R.
Ayrton, O. Maxwell: Flight Sub-Lieut., R.N.A.S.
Briggs, Martin S.: Lieut., R.A.M.C. (T.).
Bruce, Reginald: Artists' Rifles, O.T.C.
Evans, A. F.: Lieut., 2/5th Royal Welsh Fusiliers.
Isaac, W. J.: O.T.C., Engineer Unit.
Morley, Eric: 2nd Lieut., R.E. Services.
Slatyer, J. Alan, mentioned in a previous list as of the Public Schools O.T.C., has been gazetted 2nd Lieut., 183rd (Howitzer) Brigade, R.F.A.
Williams, Llewellyn E.: Artists' Rifles, O.T.C.

LICENTIATES.

Cuthbert, D. M.: Highland Fife (T.) R.G.A.
Sands, Hubert C.: 2nd London Sanitary Co., R.A.M.C.
Townsend, C. W.: Army Cycle Corps.

STUDENTS.

Andrews, C. D. : 238th (Army Troops) Coy., R.E.
 Edwards, J. Ralph : 2nd Lieut., Glamorgan R.G.A.
 Jefferies, Frank E. : 14th Rifle Brigade.
 Palmer, Kenneth : E. Lancs R.A.M.C. (T.).

The late Sir Schomberg McDonnell.

At the General Meeting last Monday reference was made by Mr. E. Guy Dawber, *Hon. Secretary*, to the death from wounds of Major the Hon. Sir Schomberg McDonnell, who held the post of Secretary to H.M. Office of Works from 1902 to 1912. Sir Schomberg had served as Chief Intelligence Officer to the London District Command, but resigned this position three weeks ago and went to the Front, in Flanders, to serve with the 5th Cameron Highlanders. He received a serious scalp wound from shrapnel in the trenches on Saturday, 20th November, and died on the following Tuesday. Sir Schomberg was a man of pronounced artistic tastes. As Secretary of the Office of Works he brought about many improvements in the Royal Parks, where he could be met at all hours of the day seeing that the Department's instructions were properly carried out. He was a great lover of trees and flowers, and introduced into this country a novel French invention for the transplanting of trees. He had much to do with the work in connection with the Victoria Memorial, and was the moving spirit in the arrangements for the investiture of the Prince of Wales at Carnarvon Castle. Mr. Dawber said that during Sir Schomberg's term of office the Institute had been brought into close relationship with him, and he had on various occasions honoured them with his presence at their Annual Dinners. The Council, he continued, recalled with feelings of appreciation the many instances afforded them of Sir Schomberg's cordiality and goodwill towards the Institute. The meeting resolved that a message expressive of the Institute's sincerest sympathy should be forwarded to Lady McDonnell.

Architects and War Profits.

The following reply has been received to the letter addressed from the Institute to the Chancellor of the Exchequer calling attention to an apparent ambiguity in Clause 35 (c) of the Finance Bill, 1915 [*see JOURNAL R.I.B.A.*, 6th November, p. 10] :—

Treasury Chambers, Whitehall : 22nd Nov., 1915.

To the Secretary, Royal Institute of British Architects.—

DEAR SIR,—In reply to your letter of the 25th ultimo, I am desired by the Chancellor of the Exchequer to inform you that it is not intended that profits arising from the exercise of a profession, the remuneration of which happens incidentally to be calculated on a percentage basis, should be included in the scope of Excess Profits Duty.

Yours faithfully,

H. P. HAMILTON.

The Alma-Tadema Memorial.

A Committee of the friends of the late Sir Lawrence Alma-Tadema, with Sir Edward J. Poynter as chair-

man and Mr. Frank Dicksee, A.R.A., as honorary secretary, have purchased his art library, which has now been handsomely installed as the Alma-Tadema Memorial in two wings of the West Room (No. 74) of the Art Library at the Museum, by consent of the Board of Education and with the active co-operation of the Director, Sir Cecil Smith. The two Misses Tadema handed the collection over to the committee for just one-half the amount they were offered by the authorities of a big public library in Germany, and have presented Onslow Ford's fine marble bust of their father, which stands on a pedestal designed by himself, and now forms a sort of a centrepiece of the Memorial.

Sir Lawrence was a keen collector of "documents" during the whole of his career. Many in the collection were purchased by him during the 'sixties. There are 163 portfolios, which contain between five and six thousand photographs, drawings, and tracings. These, in their turn, are classified in a most methodical manner. Other portfolios deal with the many details of architecture, while costumes—Assyrian, Greek, Roman, &c.—form, as would be expected, a very extensive and valuable feature of the collection. Five portfolios deal with the gods of classical and other mythology. Temples, theatres, amphitheatres, lamps, and candelabra, Greek, Roman, and Egyptian portraits constitute other varied and interesting features. Sir Cecil Smith has had a very elaborate synopsis drawn up of the contents of these many volumes, and any one subject can be referred to without delay.

The Alma-Tadema library of printed and illustrated books consists of several thousand volumes. A complete catalogue has been prepared and when funds are forthcoming it will probably be printed. Among the books there are many not hitherto represented in the Library of the Museum; a good many are duplicates, but these are welcome, for they enable the copies of books already in the art library to be circulated in various departments of the Museum and elsewhere.

One of the conditions of the Memorial was that the whole of the Alma-Tadema collection should be preserved together, and this condition has been strictly observed.

At the inauguration of the Memorial, which took place at the Museum on the 24th November, H.R.H. Princess Louise presiding, Sir Edward Poynter, P.R.A., said that the library had been purchased at a cost of £1,000—though it had been valued for probate at three times that figure—as a gift to the nation by the numerous friends and admirers of the great artist, prominent among whom was Princess Louise. In the Victoria and Albert Museum it would be readily accessible to artists and students of art and archaeology.

Princess Louise said she had great pleasure, on behalf of the subscribers and the artist's two daughters, in presenting to the nation the library, valuable drawings, and studies of such a great man's work. She felt that students would have his spirit working with them,

and that he would still go on teaching them as he loved to do when he was there.

Lord Curzon said that the library represented the tastes of the man who formed it, and that Museum seemed to be its natural home. He regretted that the works of the gifted artist were not to be found in any number in the great national collections, and he expressed the hope that the idea might occur to some generous person in the future to present more of his works to the nation.

The Society of Dilettanti's "Antiquities of Ionia."

The Society of Dilettanti are publishing shortly, through Messrs. Macmillan & Co., Part V. (being a Supplement to Part III.) of *Antiquities of Ionia*. Professor W. R. Lethaby, who has edited the new volume, explains in an Introduction that the plates now published in this volume for the first time were engraved between 1820 and 1840 from the drawings made by the members of the Second Ionian Mission sent out by the Society of Dilettanti in 1811.

These engravings (says Professor Lethaby) were to have been issued in a companion volume to Part III. of the *Antiquities of Ionia* which was published in 1840. It was delayed, however, by the death in 1839 of William Wilkins, R.A., who had been the architectural expert of the Society from the time of the Mission, and was acting as editor of the work. While thus set aside for a time, other links with the past were broken and new interests arose. Fellows travelled over the same ground again in 1838, and in 1846 Penrose made his proposals to the Society for his survey of the monuments of Athens which was conducted by him according to fresh ideas of scientific accuracy. The engraved plates were thus forgotten until a set of proofs of them were given by the Society in 1912 to the Royal Institute of British Architects, together with many of the original drawings. It was then pointed out that these engravings had never been published, and on an enquiry being made as to the existence of the plates they were found in the custody of Messrs. Ross, the copper-plate printers.

Although during the continuous research of a century most of the monuments represented in these engravings have now been otherwise published, it seems desirable from many points of view to make the plates known. They form a further record of a remarkable phase of English scholarship when we led the way in the search for classical antiquities; they complete the important work which was carried on for so long a time by the Society of Dilettanti; they represent the monuments as they were a century since, some of them having been injured or destroyed in the meantime; and the plates themselves are excellent examples of the fine work which was being produced by our engravers in the now curiously remote period, the first half of the nineteenth century.

The most important monument dealt with is the great Temple of Artemis at Magnesia, one of the most famous examples of Hellenistic architecture, and a work to which Vitruvius referred as being the very standard of his art. It has even been forgotten that this temple, like so many of the ruins of Asia Minor, was first excavated by an English party, and the delicate engravings of the very beautiful capitals and bases of the Order will be found the most adequate representations of them which have been published. Most of the rest of the plates illustrate the remarkable monuments of Myra and of other Lycian cities.

The Society of Dilettanti has from time to time presented the original works of art which it had collected to the British Museum, together with most of the drawings made for its various publications. The drawings given in 1912 to the Royal Institute of British Architects were the whole of those

remaining in the possession of the Society so far as architecture is concerned. They comprise the originals of most of the plates now published, together with many others from Myra and Telmessos which have not been engraved; there are also a large number of drawings made by Revett, Bedford, and others for the earlier volumes of the *Antiquities of Ionia* and for the *Unedited Antiquities of Attica*.

It may be remarked here, as showing what serious undertakings the old volumes of engravings published by the Society were, that each of the pictorial views included in the present volume cost about £120 to re-draw and engrave.

In a minute of a meeting of the Society held on 4th April 1875 to promote the publication of the results of the further missions to Asia Minor, undertaken for the Society by Mr. Pullan between 1866 and 1869, it was stated that nearly £2,000 had been spent in the acquisition of the new material, and that a further sum of £850 to £1,000 was required for engraving and printing the Fourth Part of the *Antiquities of Ionia*. It was added: "When it is remembered that up to the year 1852 the moneys expended by the Society of Dilettanti for the promotion of Art and Archaeology—and for that alone—amounted to upwards of £30,000, this Society cannot but feel confident that Members will show the same alacrity as before in furthering the objects, and fostering the renown, of the Society of Dilettanti."

In May 1913, at the instance of the Society of Dilettanti, the Institute guaranteed the sum of £50 towards the cost of producing the new volume. The publishers announce that subscribers in advance of publication may obtain copies at three guineas net, but on the day of publication the price will be raised to four guineas net. Members of the Society of Dilettanti, however, are offered the book at two guineas net, and 50 copies at this reduced rate have been placed at the disposal of members of the R.I.B.A.

Classic Architecture in Russia.

Mr. A. E. Richardson [*F.*] contributes to the current number of the *Architectural Review* the first of what promises to be a very notable series of articles dealing with Classic Architecture in Russia during the eighteenth and nineteenth centuries. To those whose impressions of Russian architecture are based upon the bulbous-domed churches, a medley of elements Byzantine, Tartar, Turkish and Persian, which give so peculiar a character to some of the old Russian cities, the buildings so splendidly illustrated in Mr. Richardson's article will come as a revelation. The Bourse, Petrograd, which occupies a fine site on the banks of the Neva, and which was built at a period contemporary with the Madeleine in Paris, the author describes as reminiscent of the mighty Doric Temple of Poseidon, at Paestum in Italy, but it does not plagiarise a single feature of the Greek colonial prototype. Owing to the difficulty of obtaining good building stone in the vicinity of Petrograd, De Thomon, the architect, was compelled to employ brick and stucco for the major portions of the building. He profited by the rich decorative effect given by the usual treatment of stucco in Petrograd, and made a contrast in colour between the white of the columns, the architraves, cornices, keystones and triglyphs, and the delicate grey tint of the metopes, the general wall surface, and the spandrels of the arch in the pedimented

attic. Among other buildings described and illustrated in this article are the Admiralty, Petrograd, and the cathedrals of Kazan and St. Isaac. Mr. Richardson promises to deal in future articles with the palaces and country houses, and to treat of the modern aspirations of the architects of Russia.

The Ruin of Arras.

The *Times* special correspondent, writing from British Headquarters on the 7th November, and describing the condition of Arras, says:—

After the appalling desolation and ruin of Ypres, the town does not at first appear to have suffered so terribly. But this impression is more superficial than real. There are streets, such as the Rue des Grands Viziers, which rival even the famous Rue d'Elverdinghe in Ypres. The Cathedral, always the favourite target for a German gunner, has been shattered beyond repair, and such portions of the roof as still remain hold on precariously to the split pillars of the nave. Even the famous angels, which escaped so long, have now been brought down and lie amidst the piles of white masonry on the cracked pavement, inextricably heaped up with boulders of cornices, vaulting, and walls.

The old Archbishop's Palace by the side has suffered less, but the handsome private chapel is a pitiful wreck, and not one of all the beautiful stained-glass windows but lies in shattered fragments on the floor or in the courtyard outside. The Hotel de Ville, with its famous belfry, is even more pitiable than the photographs have shown it to be, and one cannot see the *paré* round the sides owing to the piles of that exquisitely wrought masonry that made this one of the most famous buildings in the world. The huge new station is almost fantastic in its ruin. A time-table, dated 15th August, 1914, still adheres to the wall of the buffet and announces the hour when the last train for Paris will leave the town. Vauban's famous citadel, nicknamed the *Belle Inutile*, justifies the second as completely as it gives the lie to the first of these two epithets.

Lectures for Belgian Architects.

The Belgium Town Planning Committee have arranged a new series of lectures for Belgian architects and engineers, taking place at University College, London, on Thursdays in each week. Among those who are giving their services are Colonel R. E. Crompton (Consulting Engineer to the Road Board), Mr. G. Midgley Taylor, Mr. George L. Pepler, Mr. W. R. Davidge [F.], Mr. Raymond Unwin [F.] (Chief Town Planning Adviser to the Local Government Board), Mr. Aneurin Williams, M.P., Professor Patrick Abercrombie [A.], and Professor S. D. Adshead [F.].

Town Planning after the War.

The first national conference of housing societies and societies of public utility was held on the 19th November in London, under the auspices of the Garden Cities and Town Planning Association, with the object of providing for housing on town planning lines after the war. Mr. Cecil Harmsworth, M.P., presided, and representatives of 61 societies from all parts of England, Scotland, and Wales were represented. The questions discussed included the relations of housing societies to public money combines in the building industry, the co-operation between municipalities and public utility societies in future, and the amendment

of the law to allow local authorities to invest in such societies. It was agreed that the best time for taking action would be "so soon as the end of the war could be seen approaching." A committee was formed representing the whole of the groups interested in the scheme.

Reconstitution of the Library of Louvain.

The General Purposes Committee of the London County Council report that they have had before them a letter from the British Academy stating that, at the instance of the Institute of France, the Council of the Academy have expressed their willingness to initiate a movement towards the formation of a British committee to assist in the reconstitution of the Library of Louvain, and inviting the Council to nominate a delegate or delegates to serve on the proposed committee. The Local Government, Records and Museums Committee expressed the opinion that, having regard to the influential character of the proposed committee, the Council should accept the invitation, it being understood that the representation of the Council on the committee is not to be taken as committing the Council to any financial liability. The London County Council at their meeting on the 23rd November adopted a recommendation that the Council's representatives should include the Vice-Chairman of the Council (Major Ernest Gray) and the Chairman of their Records and Museums Sub-Committee (Mr. Andrew T. Taylor [R.F.]).

The Institute of Arbitrators.

The Institute of Arbitrators, the first number of whose organ is just issued, under the title *Journal of the Institute of Arbitrators*, was founded on the 1st March 1915, at the instance of members of those professions whose services are usually invoked for the purpose of acting as Arbitrators in commercial matters, in references under partnership agreements, building and other trade contracts. The aim of the Institute, the *Journal* says, is "to raise the status of Arbitrators to the dignity of a distinct and recognised position as one of the learned professions." As means to this end it is proposed to hold meetings for the reading of Papers connected with the duties of arbitrators; to promote a study of the law and practice relating to arbitration and awards; to consider, originate, and support improvements in the laws relating to arbitration; to provide means for testing the qualifications of candidates to membership by examination in theory and practice; to form a library for members, and to provide a hall and rooms for the holding of arbitrations; to promote and encourage the practice of the settlement of disputes by arbitration; to promote, or join with any other body in promoting, any Act of Parliament, or for procuring the grant of a Royal Charter with a view to the attainment of any of the above objects. The Institute is open for the enrolment of members possessing the necessary training and experience in the professions of Consulting, Civil,

Mechanical, Electrical and other Engineers, Architects, Surveyors, Accountants, and similar professional bodies. There are two classes of members, "Fellows" and "Associates," and the Council has power to admit to these classes until admission is prescribed by examination. The members of the Council, it is stated, have been selected with a view to rendering the Council thoroughly representative of the professions to which the Institute is intended to appeal. Lord Headley, M.Inst.C.E.I., is President, and Mr. Henry Adams, M.Inst.C.E., Vice-President. Architects on the Council include Messrs. Max. Clarke [F.], E. C. P. Monson [F.], Edward J. Sadgrove [F.], and H. D. Searles-Wood [F.]. The *Journal* of the Institute is to be issued quarterly. The first number contains among other matters short articles on the subject of Arbitration and a digest of recent cases affecting arbitrations which have been decided in the High Court. Further particulars may be had from the Secretary, at the offices of the Institute, 32 Old Jewry, E.C.

British Columbia Timber.

From the office of the Canadian Trade Commissioner has been received a copy of a pamphlet entitled "British Columbia Timber," recently published by the Forest Branch of the Government of British Columbia, with the object of attracting increased attention to the qualities of Douglas Fir and other British Columbia timber. British Columbia occupies the northern central section of the 2,000 mile continental forest belt of the Pacific Slope. The stand of merchantable timber in the Province is estimated to reach the total of 400,000,000,000 feet board measure, and the annual cut is at present in the neighbourhood of only 1,500,000,000 feet board measure. The forests can supply indefinitely a yield considerably greater than that. The Forest Branch of British Columbia supplies exact information on the strengths and other qualities of British Columbia woods, the uses to which they are adapted, and the general run of prices and stocks obtainable. The pamphlet gives an interesting description, with illustrations, of the principal export timber trees, their qualities and uses, together with a table showing the comparative strength values of some of the principal structural timbers of North America. It is claimed for Douglas Fir that no other one species exists in such great individual sizes, such excellence of quality and such vastness of quantity. With the exception of the Sequoias of California, it is the world's largest timber tree. The average height is 150 to 225 feet, with a diameter of 3 to 6 feet; some trees run to 300 feet in height and 15 feet diameter. Owing to its great strength, durability, lightness, cheapness and size, Douglas Fir is stated to be pre-eminently suited for all dimension material, beams, joists, scantling planks, and boards needed for any purpose in any kind of building, whether exposed or not to the weather. It is extensively used on the Pacific coast of America for window sashes, doors and flooring, and is especially attractive for parquet floors. It is the favourite

panel wood on account of its beautiful grain and figuring when slash-cut or veneer-cut, and because it takes stain so well. Its use in furniture is steadily growing, especially for store, office, hotel and church furniture and fixtures. Other woods recommended are Western Hemlock, Western Larch, Tamarac (or Eastern Larch) and Norway Pine; and details are given of their preservative treatment for special service.

Since the above was written two further booklets have been received from the Canadian Trade Commissioner—viz., (1) "How to Finish British Columbia Wood," and (2) "British Columbia Red Cedar Shingles." The first of these is designed to bring to the attention of architects, wood-finishers, builders, and prospective home-makers the desirability of selecting British Columbia woods for interior finishing of their homes, offices, and other buildings. It also gives instructions as to how the wood should be surfaced, stained, varnished, or painted. Photographic illustrations are given of some very charming interiors decorated entirely in wood—Douglas Fir wall panels, ceiling panels; and flooring; Western Red Cedar ceiling panels; Western Hemlock panels, staircase, mantelpiece, and flooring; natural-finished beam ceilings in Cedar, &c. The second pamphlet shows what can be done with Red Cedar Shingles in exteriors. The North American Indians used Red Cedar for their dug-out canoes and totem poles. Some of the latter still stand in various parts of British Columbia as sound to-day as when they were put in over two hundred years ago. The resistance of Red Cedar to decay is emphasized by the perfect condition of the roof of an old block-house, of which an illustration is given, which has been exposed to the elements for over half a century. Many of the cedar trees found in British Columbia are over a thousand years old and are still sturdy and strong. One of the chief characteristics of the Red Cedar Shingles is the fact that they are sawn "vertical grain." This causes them to lie flat and stay flat, making a smooth, fine roof which the hardest driven snow or rain cannot get under. After the rain and snow comes the heat, but it is claimed that no amount of heat will cause a vertical-grain-cut shingle to warp, twist, crack, or crumble. An illustration is given of a whole terrace of very attractive-looking houses built entirely in Red Cedar Shingles, and of a large and substantially built country house in the same material. To get the utmost wear out of the shingles they must be laid with galvanized or the old-fashioned iron cut nails; or, better still, with zinc or copper nails.

The Canadian Trade Commissioner has kindly offered to forward copies of these pamphlets direct to any member wishing to have them. His office is at 73 Basinghall Street, E.C.

Painting and Prevention of Rust.

The *Zentralblatt* draws attention to a series of experiments conducted by Liebreich and Spitzer to de-

termine the effect of the number of coats of paint on the rate of rusting of iron. They polished four iron plates and painted them—the first with one coat, the second with two, the third with three, and the fourth with four. The plates were then exposed to steam for one day. The paint was dissolved off and the following distinct results noted:—

The iron under the single coat was bright all over, that under two coats was partly rusted, that under three coats rusted still more, while the iron under the four coats was covered with rust. This experiment shows that several coats of paint do not protect as well as one coat.

The explanation of this is that subsequent coats of paint or varnish tend to dissolve part of the previous coat. This has the effect of loosening the previous coat and making it porous, the porosity increasing with the number of coats. Air and moisture penetrate the pores and the iron below is rusted.

Where rust is feared, the coat of paint or varnish is usually made too thick, and the application of a second and third coat naturally does no good. The proper procedure is to remove all old paint by using the sand blast, solvents, etc., and then give the clean iron surface a single coat of the paint or varnish.

Architectural Association Active Service Committee.

The A.A. Active Service Committee commenced its work in connection with the A.A. War Service Bureau in October, 1914, its objects being (1) to provide necessities and extra comforts for men connected with the architectural and surveying professions generally who are serving with the Colours, and (2) to look after the wives and dependants of the mechanics who have been recruited from the building trades through the A.A. War Service Bureau.

In their report issued exactly a year after the Committee was formed, it is stated that since October, 1914, they have sent many necessities and extra comforts to men connected with the architectural and surveying professions generally (including a number of men from the building and allied trades), who are fighting for their country all over the world. The Committee have also visited many of the families left behind, and have been able to give assistance and advice where needed.

In the twelve months dealt with in the report more than 1,250 parcels were despatched, which, with very few exceptions, have been safely received and gratefully acknowledged. The contents, which have varied with the seasons, have included flannel shirts and woollen goods of all sorts, towels, soap, handkerchiefs, fly-nets, sun-protectors, "housewives" (designed by a member of the Committee and much appreciated by the men), dubbin, bootlaces, cigarettes, tobacco, pipes, lighters, shaving soap, tooth-brushes, candles, condensed milk, cocoa, coffee, potted meats, tinned fruits, cakes, sweets, lemonade, chocolate, and also quantities of games.

A gramophone and a concertina, which were specially asked for, were given by friends as soon as the need was made known. Very large numbers of magazines and professional papers have been and are being despatched each week, which are much appreciated by the recipients and are read and passed on until they fall to pieces.

The number of names on the parcel list increases as the different regiments are sent abroad. Besides the men in France, Flanders, India, Malta, and Egypt, there are now many in Gallipoli who write and ask for anything the Committee can send them. They are especially glad of parcels in a country where no extra comforts can be procured, and where even water is sometimes scarce.

The funds are now very low, and it will be impossible for the Committee to carry on their work without further help. They, therefore, earnestly appeal for subscriptions and gifts of woollen articles, cigarettes, magazines, and light books.

As the Committee have the use of the premises of the Architectural Association, there are no working expenses beyond the cost of postage. With another winter to be faced, the possibility of having to cease sending parcels, which are so much looked forward to, will not bear contemplation.

All cheques and parcels will be gratefully acknowledged and should be sent to Mrs. Maurice Webb, 18, Tufton Street, Westminster, S.W.

The various letters quoted in the report as samples of some hundreds, show how much the work of the Committee is appreciated. With the continually increasing numbers of architects and surveyors joining the Forces, the work of the Committee is likely to extend considerably.

CORRESPONDENCE.

Alien Enemy Members.

Moncton, N.B., Canada: 12 Nov. 1915.

To the Editor, JOURNAL R.I.B.A.

SIR,—I have just received the last publication of the JOURNAL, and read the two letters therein from W. E. Vernon Crompton and G. Scott Cockrill, on the question of alien members.

I am far away from home, where no doubt feeling runs higher than in this great colony of Canada (and the feeling here is intense in its loyalty), so probably I am not sufficiently in touch with the question fully to value the expressions contained in the above-named contributions, yet my sympathies go entirely on the side of Mr. Crompton.

I have just recently lost my only son in the Belgian trenches while fighting for the Empire with a Western Canadian battalion, and naturally my feelings towards the enemy are bitter; still they do not go so far as to approve of the deletion of the names of German or Austrian men which have been gladly and honourably placed upon our roll. I was always taught that Art had no geographical or racial boundaries: all artists, no matter what nationality, are brothers: and until it can be proved that these German and Austrian Hon. Corresponding Members, whose names were honourably entered on the roll of the R.I.B.A., have incontestably proved to have (1) abetted in destroying the ancient monuments of France or Belgium; (2) are actually fighting against us—and that willingly; (3) (and probably the most important) have used their connection with our Institute to assist their countries' operations to our detriment, I should hesitate—and hesitate long—before taking the drastic step proposed.

The day of peace will come, when the operations of war will give place to the arts of peace. Then what shall we say—what shall we feel towards these men? What will be our justification when they say, "You judged us unheard"? We shall then hardly feel that we upheld the British principle of holding every man innocent until he be proved guilty. Many Germans and Austrians no doubt deplore the fact that their countries' action is so hostile to us. Might these men it is sought to humiliate be amongst that number?

Mr. Cockrill is wrong when he states "the R.I.B.A. in electing these gentlemen as Hon. Corresponding Members conferred upon them an honour" and stops there. No man is elected to the R.I.B.A. as an honour conferred on him alone. He at the same time confers honour on the Institute, because if he brought no honour the Institute would have none of him. Therefore until you prove that these men have done something to sully the honour of the Institute or their own honour which makes up the honour of their membership you must deal with them in moderation and in a common-sense fashion. Might not Mr. Cockrill have raised his voice a little higher after condemning the men, and be logical by condemning the ideas, and cut out the Godwin Bursary Report dealing with "Continuation School Buildings in Germany and Austria" (!) which—irony of fate—appears nearly alongside his own letter?—Yours faithfully,

J. W. FRAZER [A.].

OBITUARY.

Lieut. Spencer E. Barrow [A.].—One of the most promising members of the architectural profession in Lancaster has passed away by the death in St. Thomas's Hospital, London, of Lieut. Spencer Ellwood Barrow. The deceased officer, who was 43 years of age, was the younger son of the late Mr. William Barrow and of Mrs. Barrow of Yew, Garth, Lancaster. He was educated at Oliver's Mount School, Scarborough, and served his articles as an architect in Newcastle-on-Tyne. He was admitted an Associate of the Royal Institute in 1900, and for 15 years had been professionally engaged in Lancaster and was much esteemed in his profession. Among public buildings in Lancaster which he designed were the Y.M.C.A. Institute and The Friends Hall, and he had done much private work. For a number of years he was Hon. Treasurer of the Royal Lancaster Infirmary. Shortly after the outbreak of war he obtained a commission in the 5th Bn. the King's Own Royal Lancaster Regt., T.F., although coming of a Quaker family prominently associated with the Society of Friends in North Lancashire and the Midlands for generations. He went to the front in May and had only been in the trenches a few hours when his left arm was shattered. He was moved to Boulogne and thence to St. Thomas's Hospital. He appeared to be making excellent recovery, but septicaemia set in and proved fatal on the evening of November 16th.

Robert Griggs [*Associate*, elected 1876] died on the 24th November at the age of seventy-one. Mr. Griggs was in the office of the late Mr. H. Saxon Snell from 1866 to 1871 as pupil, assistant, and manager, except for a period of two years during which he served as clerk of works on some of Mr. Snell's large buildings. He had been architect and surveyor to the Berkeley Hotel Company since 1888, and carried out for them the additions made to the hotel, on the sites of Nos. 73-74 Piccadilly, with the alterations, &c., in Berkeley Street in 1896-97, and the further improvements effected three years ago. He was the architect for the renovation, with alterations and improvements, of Batt's Hotel in Dover Street, Piccadilly.

The late George Henry Hunt [pp. 29-30].—It has been pointed out to me that Mr. S. P. Cockerell was the assessor in the Scarborough Spa Buildings, not Professor Cockerell. The latter died in 1863, and the competition took place in 1875.—CHAS. E. BATEMAN.

Death of Lady Richmond.—Lady Richmond, wife of Sir Wm. Richmond, B.A. [*Hon. A.*], was knocked down by a motor-car while crossing King Street, Hammersmith, on the 21st ult. She was taken home, and died the same night from her injuries. At the General Meeting last Monday the Hon. Secretary referred to the tragic event, and it was resolved that a message of the Institute's deepest sympathy in his great affliction should be conveyed to Sir William.

THE EXAMINATIONS.

The Statutory Examinations.

Examinations qualifying for candidature as District Surveyor in London, and as Building Surveyor under Local Authorities, was held by the Institute pursuant to Statute on the 21st, 22nd, and 23rd October. Six candidates attended for the District Surveyors' Examination, and the following passed:—

ERNEST FIANDER ETCHALLS [*H.A.*], A.M.Inst.C.E., "St. Francis," 23 Franciscan Road, Balham, S.W.
FREDERICK EDWARD MENNIE [*A.*], P.A.S.I., 1 New Court, Lincoln's Inn, W.C.

WALTER STEPHEN TUCKER [*A.*], 1 Dunbar Avenue, Norbury. Two candidates attended for the Building Surveyors' Examinations and passed, viz.:—
JOHN DENYER, 12 Milner Road, Nottingham.
FREDERICK WILLEY [*F.*], 60 Western Hill, Durham.

The successful candidates have been granted by the Council certificates of competency to act in the respective positions.

Advisory Members.

The Council have appointed Mr. C. H. Reilly, M.A. Cantab., Professor of Architecture at Liverpool University, Advisory Member of the Board to represent Liverpool University.

The Leeds School of Art.

The Council have approved the three years' Architectural Course at the Leeds School of Art as exempting from the Intermediate Examination.

MINUTES. II.

At the Second General Meeting (Business) of the Session 1915-16, held Monday, 29th November, at 3 p.m.—*Present*: Mr. Ernest Newton, A.R.A., *President*, in the Chair; 17 Fellows (including 13 Members of the Council), and 7 Associates (including 2 Members of the Council)—the Minutes of the meeting held 1st November 1915 having been published in the JOURNAL, were taken as read and signed as correct.

The Hon. Secretary announced that since the last Meeting news had been received that the following Associates had fallen in the War—viz., Lieutenant Spencer Ellwood Barrow, of the 5th Battalion King's Own Royal Lancaster Regiment; Lieutenant Edmund Herbert Gibson, of the Royal Naval Volunteer Reserve; and Lieutenant George Alexander Kay, of the Sherwood Foresters; whereupon it was Resolved that the deep regrets of the Institute for the loss the profession had sustained by the death of these members be entered on the Minutes of the Meeting, and that a message expressive of the Institute's sincerest sympathy be forwarded to their nearest relatives.

A vote of condolence was also passed to Lady Schomberg McDonnell for the loss of her husband, the Hon. Sir Schomberg McDonnell, G.C.V.O., K.C.B., Secretary of H.M. Office of Works 1902-1912, who was wounded in the trenches on the 20th November and died on the 23rd; and to Sir Wm. Richmond, R.A. [Hon. A.], for the loss of his wife, who was knocked down by a motor-car and died from her injuries.

The death was also announced of Robert Griggs, *Associate*, elected 1876, and Frederick Ball and William Shanks, *Licentiate*.

The Secretary announced the results of the Statutory Examination held by the Institute in October.

The Secretary announced that the Council, in the exercise of their discretion under By-law 78, had admitted the East Africa Institute of Architects to alliance with the Royal Institute.

The following candidates were elected by show of hands:

As FELLOWS (11).

ALLEN: JOHN GORDON [A. 1910].
 FARMER: JAMES WESTBROOK [A. 1908], Buenos Aires.
 QUIGGIN: EDGAR [A. 1905], Liverpool.
 ROBSON: PHILIP APFLEBY [A. 1897].
 Together with the following Licentiate, who have passed the Examination qualifying for candidature as Fellows:—
 BLACK: ALFRED BARHAM, Adelaide.
 FORBES: JAMES EDWIN.
 MACNIVEN: GEORGE DONALDSON, Edinburgh.
 PEARSON: CHARLES BULMAN, Lancaster.
 TATE: JOHN DUNCAN.
 THOMPSON: CHARLES CLAYTON, Derby.
 WITTET: GEORGE, J.P., Bombay.

As ASSOCIATES (23).

ADAMS: PERCY JOYCE [S. 1911].
 ANDREW: HARRY [S. 1912], Hull.
 BALSARA: PHEROZSHAH FARDOONJI [Special], Bombay.
 BENNETT: JAMES [S. 1914].
 BRUCE: REGINALD, P.A.S.I. [Special].
 CATCHPOLE: EDGAR GOODING [S. 1908], Ipswich.
 DUNCAN: ALEXANDER MACLAUGHLAN [Special], Glasgow.
 FRANCIS: ERIC CARWARDINE [S. 1911].
 HORNIMAN: JOHN HENRY [S. 1909].
 LOWETH: SIDNEY HAROLD [S. 1913].
 MITCHELL: CYRIL HAWTHORN [S. 1914], Wellington, N.Z.
 MUSMAN: ERNEST PAUL BRANDER, B.A. Lond. [S. 1912].
 NICHOLS: CHARLES EDWIN [S. 1911], Sheffield.
 PAGE: CHARLES LANCASHIRE [S. 1907].
 REIVE: THOMAS [S. 1908], Manchester.
 ROBERTSON: MANNING DURDIN [S. 1911].
 ROBINSON: ALFRED DOUGLAS [S. 1909].
 SAYER: HARVEY ROBERT [S. 1905], Southampton.
 TURNER: ALBERT ISAAC [S. 1909].
 WALKER: HAROLD FREDERICK [S. 1913].

WILLIAMS: ENOCH [S. 1908], Cardiff.

WILSHERE: REGINALD SHARMAN [S. 1912].

YOUNG: WILLIAM CECIL [S. 1910], Manchester.

The Secretary announced that by a resolution of the Council pursuant to By-law 22 the following gentlemen had ceased to be members of the Royal Institute:—*In the class of Fellows*, William Thomas Allen, Arthur Alderson France, William John Gilliland, Cholton James, William Norman Pogson, Reginald Pope, Frederick Bennett Smith, John Collingwood Tully, Horace Magennis Wakley, James Leonard Williams. *In the class of Associates*, Thomas Culy Grimble, Samuel Woods Hill, Bruce Johnston, Harry Wilson Pye, James Saunders, Christopher Mitchell Shiner, George Daniel Stevenson, Frank Sykes, Ernest William Malpas Wonnacott, Richard Wylie. *In the class of Licentiate*, Cyril Eyres Ainley, Thomas Ashton, Stanley Bailey, Fred Baker, George Alfred Birkenhead, Frank Bleasdale, John Francis Burkinshaw, Ernest Newman Butler, Harold Forbes Clarke, George Scott Coburn, George William Cooper, James Gregory Crisp, Herbert Denton, Ernest Gordon Ross Downer, Thomas Dykes, Allan George, Rainald William Knightly Goddard, David Frederick Green, E. G. Harrison, John Black Hector, James Hardwick Higgs, John Grafton Izard, J. Watson Jordan, Montague William Leman, Alexander MacRae, Alexander Robert Meldrum, George Frederick Miller, Harold Victor Milles-Diamond, Joseph Robert Musto, John Banner Pinchbeck, Cecil Molynoux Quilter, James Gilbert Reynolds, Alfred John Roddis, George Sedgor, John Walker Smart, George Henry Stevenson, John Taylor, Alexander Cameron Todd, Edward Tough, Charles William Townsend, Noble Vaux, John William Wade, Harry William Wakeman, Joseph Richard Wray.

The next business on the agenda being a motion for an alteration in the Regulations for Architectural Competitions, a question which, under By-law 67, could only be brought to an issue by a quorum of at least forty members, the President drew attention to the want of a competent quorum and referred to the absence of many members on military duties, and it was agreed on his suggestion that it would not be advisable to discuss the proposition, as no decision could be arrived at.

Mr. Langston, having pointed out that owing to the new arrangement of printing the agenda papers as part of the JOURNAL, members were put to the inconvenience of bringing their copies of the JOURNAL to the meetings, and suggested that agenda papers might be issued separately for the use of members attending the meetings, the President replied that a note would be made of the suggestion.

The President announced that there being no candidates for nomination the Meeting fixed for the 13th December would not be held.

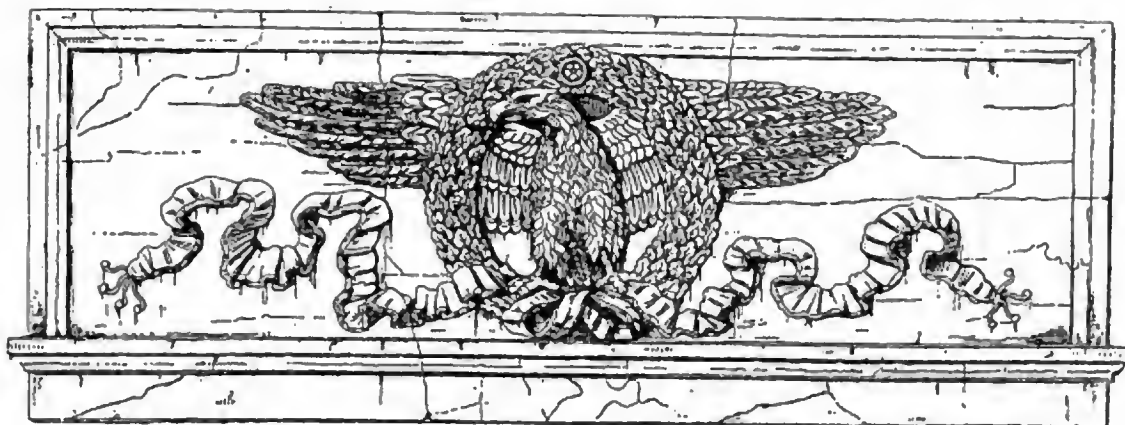
The proceedings then closed, and the meeting separated at 3.20 p.m.

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THE LONDON SOCIETY'S WORK IN CONNECTION WITH THE LONDON DEVELOPMENT PLAN.

By DAVID BARCLAY NIVEN [F.].

AT the outbreak of the War the London Society found its energies greatly curtailed, and many of its supporters feared that for a time at least active work would have to be suspended. Happily this view was not general, and at a meeting convened to consider the position Sir Aston Webb (the Chairman) propounded a scheme to extend the activities of the Society during the period of the War by the preparation of a Great Development Plan of London. Sir Aston Webb described the present times as analogous to the position in France when, during the Revolution, a Commission of Artists produced the imaginative Plan of Paris on which Baron Haussmann in happier times based the vast scheme of improvements which has given Paris its unity, its verdant setting, and much of its charm.

Sir Aston Webb's welcome proposal was immediately adopted; it had already been recognised that a Plan for the Metropolis, prepared with a view to the future, was essential if an ideal was to be created to direct the growth of Greater London, which already covers 700 square miles and embraces a population of over 7,000,000 people. An organised Plan had long been necessary; nothing so comprehensive had previously been attempted, and the absence of some such standard has made co-ordination between the eighty local authorities engaged in its management wellnigh impossible.

The Plan being decided upon, a special fund was started by donations from Lord Plymouth and Sir Aston Webb, which resulted in £500 being subscribed, including substantial contributions from the Artists' General Benevolent Institution and the Architects' Benevolent Society. This fund has given employment to a number of professional men ineligible for the Army, enabling them to tide over the present difficulties and utilise their talents in congenial work. But it is estimated that at least another equal amount will be required to complete the work, and a special effort is now being made to this end.

The scheme once assured, a Plan Committee was formed, and six of its members—Professor S. D. Adshead, Mr. Arthur Crow, Mr. W. R. Davidge, Mr. H. V. Lanchester, Mr. H. J. Leaning, and the present writer—undertook the particular direction of the assistants employed on each of the six radiating sections, corresponding with the sections into which the Conference of the Local Government Board on the Road Board proposals had divided London. These directors have since added Mr. L. Chubb and Mr. W. E. Vernon Crompton to their number, and have appointed Mr. A. E. Richardson as Hon. Secretary, to secure uniformity in production.

The work is being carried on in the Society's premises in Abingdon Street, Westminster. During

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the year or more in which it has been in progress the assistants employed have become expert chartographers. They have had, however, to surmount many difficulties, the most important being that the 6-inch Ordnance on which the map is based was found to be very incomplete and misleading, some of the sheets not having been amended since 1894. To make the necessary alterations and fill in the omissions has proved a formidable task, many areas which are shown as open fields having been completely built over. These facts had to be ascertained street by street, and sometimes house by house, before the possibilities of the future could even be considered. Now, however, we are fortunate in being permitted by Colonel Hellard, C.B., of the London Traffic Branch of the Board of Trade, who has all along taken an appreciative interest in the scheme, to copy and transfer such recent developments as are included on his maps. The Surveyors of the Borough Councils in and about London have also been most helpful, especially in giving access to local projects and other information.

When completed the Plan will contain imaginative proposals founded on ascertained facts. It will include the arterial roads recommended by the London Traffic Branch of the Board of Trade, with suggested modifications. It will also endeavour to co-ordinate the most promising of the numerous town-planning schemes and proposals prepared from time to time for different parts of London, together with general suggestions for future development and improvement.

An attempt is being made to link up as far as possible the open spaces in and about London. These in Greater London already number over 2,000, and have been classified as follows :—

- A. Public open spaces under the control of (1) the Crown, (2) the Government, (3) local authorities.
- B. Permanently open spaces not necessarily accessible to the public, such as palace gardens, reservoir areas, allotments, parks, cemeteries.
- C. Private recreation grounds, comprising golf links and other club lands.

Now that these areas are shown for the first time, correctly to scale, and in proper relationship ; it is evident that they are by no means scientifically disposed. Suggestions are, therefore, being made to combine with these certain further spaces necessary to make a complete system, so that a playground of some kind should, if at all possible, be available within, say, half a mile of the dwelling of each child. This would undoubtedly be of great benefit to the health of the community.

Greater London now embraces a large number of boroughs, all more or less of ancient origin, and each with its own centre of population and traffic. These boroughs have long been linked to London by arterial roads, which, however, are generally congested and always irregular when passing through such centres. To straighten and widen these has proved to be a slow, inadequate and costly proceeding. Instead, it is now proposed in many cases to construct well-graded and ample relief roads clear of congested districts ; this will expedite through traffic, save expense, and avoid the destruction of cherished features and historic buildings.

It is also essential that outlying boroughs should be brought into closer relationship by improved communication roads. Thus places like Richmond and Croydon, already directly connected to London, would be brought into touch with one another. By uniting these it will become practicable for commercial establishments in such places to extend their businesses in directions now only possible to organisations in the centre of London ; this will tend to decentralisation and the better distribution of traffic. Furthermore, such roads are necessary for the development of inaccessible and often beautiful back lands. In certain of these it will be found expedient to erect wholesome workmen's dwellings in pleasant and healthful surroundings, on cheaper sites, and with convenient and inexpensive traffic facilities.

In certain areas also, especially in the eastern sections, near convenient road and rail (and in some places, canal and river) facilities, it may be expected that relief factories in connection with businesses in the centre of London would spring up instead of in the provinces, as has been the recent tendency.

Likewise, many of the London hospitals, standing on limited and very valuable central positions, might very well be removed to this zone and release the sites they now occupy for other purposes. The central hospitals could then be reduced to little more than receiving or casualty institutions, all in easy communication with the new sub-Urban establishments.

A system of subsidiary markets, too, should be established in outer London in connection with certain of the central markets ; this would save the conveyance of much produce into town which has now to be reconveyed to the suburbs.

A series of open spaces external to London for aviation stations might also be arranged for in convenient relation to the arterial roads and the suburban railway systems.

The railway problem in and about London is not at present being developed in this Plan, but Mr. H. J. Leaning, a member of the Committee, is engaged upon a co-ordinate study of the question with a view to its being subsequently considered.

Care is being taken to show on the Plan everything of permanent, historic, and artistic interest, together with natural scenery, view points, and all other matters likely to enhance interest in London ; and an effort is for the first time being made to study in a comprehensive manner the requirements of London, so that the reaction of one proposal upon another may be realised and provision made for the future. It is sincerely hoped that many of the suggestions presented will prove to be an intelligent anticipation of what is needful both for the benefit and beautification of London.

It is not expected that the Plan in its conclusions will be final, but its production should form a valuable basis of fact and lively suggestion for criticism and further endeavour.

The effort which the London Society is making in the production of this Great Development Plan is inspired primarily by a desire to do practical service of economic and artistic value to the community, and will form its contribution to the happier times which are expected after the War.

THE NEW EPOCH.

By Captain R. BURNS DICK [F.], Tynemouth Royal Garrison Artillery.

Presidential Address to the Northern Architectural Association, 17th November, 1915.

GENTLEMEN,—A year has passed since I had the privilege and pleasure of addressing you as President of the Northern Architectural Association. I find myself for a second year in that honoured position, and would at the opening of a new winter session take this somewhat tardy opportunity of thanking you most sincerely for the honour you have done me.

If perchance in the years to come some member, perhaps a budding President of this great, and in that future time much greater, Society should take it into his head, out of an idle curiosity, or maybe for inspiration for his coming Address, to glance through the Presidential Addresses of the past, would he be struck by anything singular about so apparently commonplace an opening as that just uttered ? No doubt he would wonder how it happens that, in what he very properly would suppose was a live institution, the President does not address a meeting from one year's end till the next. But if he glances at the top of the page and notes the year 1915, the second of those fateful years seared deep, literally, with the branding irons of fire-forged steel, into the history of his country, he will understand ; and I would crave your indulgence while I have a word with this my distant successor.

“ Well, son of the future, if you are merely curious, read

on ; but if you be my unborn President searching for professional ideas from the past, you may pass along, for here you will find little for your purpose. A President who has not only entirely ceased to pursue his work of construction but is vowed to and frankly eager for destruction, who no longer controls the craftsmen engaged in displaying in concrete form the growing wealth and advancement of a nation, but, on the contrary, is employed with these same workers in studying how best to make use of mighty engines of war, in blasting off the face of the earth the ingenious barbarians who would dare to lay their bloody grasp on that nation's most sacred possessions—such a President can be of little assistance to you who live in happier and more settled times. To him an Architectural Address at such a time is unthinkable. Like so many of his professional brethren, he is engaged in the common duty of preserving what has been entrusted to him by his fathers from the polluted touch of the despoiler, but unlike so many who are paying their debt in the forefront of the conflict and those who, alas ! have paid their all, his lot so far has been to watch and wait ; and so he is permitted after a year to fulfil a small part of his obligations in thus addressing his fellow-members of the N.A.A.

“ But stay, my scion of a noble profession ; whatever

your motive, I would have you read on, for I doubt not that as the recorded thoughts of the most obscure worker of the age of Pericles would be perused with avidity by us to-day, so the views of one living in a mighty age of your ancestors will prove interesting if not curious to you who possess a knowledge unknown to us—a knowledge for whose secrets our age is delving to uncover for your enjoyment.

"Forget not that much of that which you enjoy, of that superiority of knowledge and power, of that enlightened outlook on life, of that toleration and sympathy which seem so lacking in this age, of all that seems to place you so much above this age of selfish and senseless conflict, has been built up on the maimed and dead bodies of those who would rather give up life itself than that those ideals to which you have attained, and of which you are so justly proud, should be sacrificed to the god of ruthless force.

"No class in what we believe to be the enlightened nations has withheld its contribution to this struggle for beauty in human life, least of all the profession to which you belong. This and other Societies throughout the Empire to-day mourn the death in battle of some of their most promising and talented members, whilst thousands of architects and students of our art have taken up arms to preserve and foster this beauty.

"We can admire force and strength in their many manifestations. We will not withhold the admission that the visible expression of rugged and unrestrained power rouses in us a sense of admiration—that even a certain beauty of form may be associated therewith; but we do not confuse this feeling with the sentiments aroused by the beauty that is born of the graces and nobility of the human soul. We can see in the cruel and stealthy movements of the tiger, with its form so wonderfully expressive of latent power, something that arouses in us a sense of perfect fitness for the functions of its being—functions that call for craft and energy to make the spring upon its weaker prey. But though we admire this work of Nature, we hesitate not to destroy it in order that the still more beautiful form of man, with its equally perfect fitness for its functions, which include the use of its strength for the protection of the weak, may survive.

"And so, my friend, we architects, who are citizens first and custodians with all Britons of the riches bequeathed to us, are chiefly concerned at the present, like the tiger-slayer, with the destruction of an admittedly remarkable manifestation of power, which would be well worthy of preservation and use if it could be tamed. This untamable foe of ours, in his national monuments and wherever there is room for it in his architecture, breathes his spirit of arrogance and dominating force; his brutal soul exhales through his works the foetid odour of the jungle monarch. It is great, this animal majesty, but it is a thing to be kept apart, confined behind bars, or better still deprived of life, and its harmless carcase preserved for the students of evolution.

"You, no doubt, on your brief vacations, have sped over the North Sea in your air-car and visited these wonderful old specimens of the jungle age in Germany, and with a sneaking admiration have gazed upon them and pondered over the perversion of intelligence that created them. But if you are tempted to regret that something of force has disappeared from architecture by the suppression of the would-be superman, remember that the freedom which permits of the untrammelled expression of the best that is in you and which has resulted in the great advance your age can claim over that when George V. was King, is only possible by reason of the breadth of sanity of Britain and

her Allies, which dissipated the poison gas of the Teuton monster. While I write, the task is still uncompleted, but when you read it will long since have taken its place in the list of accomplished facts that have opened up the wider and fuller life which you enjoy. I would I could project my vision into the life of the future, and so provide a stimulus to my fellow-workers of all creeds and trades. They, however, no matter what the sacrifices, will see that posterity is not betrayed.

"Adieu, friend! I have confidence that what you have received at the hands of your sometimes blundering ancestors will be well guarded by you; for are you not trained to war as well as architecture, and are you not ever prepared and organised to crush with force the hydra that will for long ages lie in wait for the time when the watch is relaxed and the time seems ripe to strike for world-power? Watch ever, and above all be armed! Adieu!"

Now, gentlemen, to justify such a claim as I have just made in the eyes of posterity we have strenuous work before us. This is no time to pursue the old way, with nose up against the dry bones of archaeology, trying to tear the souls out of old corpses that ceased to possess them long since when their purpose was served and their course run, like everything that is born, whether of the travail of a woman or the sweat of a man; no time even to consider the practical problems that so properly engaged our attention in normal times. We must now use every endeavour in our power to defeat the forces that are deliberately upsetting all those conditions on which we based our course of action in solving those many problems. Until the horrible disease which has seized hold on mankind has been stamped out, our work is useless. We must commence the process of inoculation that will protect against a recrudescence. We must find the serum that will destroy or make innocuous those germs of mad ambition. But this disease, having once laid hold on man, will leave an indelible mark upon him, and though I believe he will emerge stronger than ever, all his future course will be marked by the measures of protection his prudence suggests.

Now, as man's ingenuity and adaptability are boundless, it is impossible to forecast with any certainty the form these protective measures will take, but no time must be lost by us in setting to work to evolve them. In our particular domain the influence of this time will be very far-reaching, and one is impelled to a little speculative thought as to what lies ahead. Curiously enough, on attempting to pierce the veil of the future, my mind instantly flew back 2,000 years. The impulse was irresistible and the explanation simple. No sooner had I formed the concept *war-architect* than my memory automatically ejected out of one of its "pigeon-holes" the same combination, labelled "Vitruvius, appointed by Cæsar Augustus architect in charge of the engines of war."

We have all read Vitruvius, that shrewd writer on architecture, and with a certain amount of amusement perused the list of attainments he considered an architect should possess; not the least of which, judging from his tenth and last book, was skill in the design and use of war engines. You recall the, to us, humorous description of one city architect who devised a great weapon for the siege of a rival city, and the more than ingenious architect who reduced his rival's skill to nought and saved his country from defeat. Some of his advice may appear amusing, but old Vitruvius was a serious writer with a great knowledge of his craft, and was as devoid of conscious humour in his writings as a German reply to an American "Note," though distinctly shrewd and worldly-wise, as for instance

whon he treats of the choice of a situation for various buildings. For a temple to the "Goddess of Health and such other divinities as possess the power of curing diseases," a site with *wholesome air and pure water* should be selected, where the sick will more readily recover and a *reliance upon the divinity be thereby increased*. In other words, "Trust in the Lord, but keep your powder dry." Well, I can see the time returning when the architect will again play an important part in the device of methods to protect his city from the assault of the foe from without; and we would do well to show the wisdom of Vitruvius as displayed in his recommendations on the choice of a site.

We must first grasp the import of this great upheaval; this is not the final war, it is the first of a new epoch. No matter how or when this conflict comes to an end, can anyone picture a peace that will be anything but the pause of exhaustion? We are a peace-loving people, and I believe would be content to remain so if it were possible; but though there are people amongst us so afflicted with incurable myopia as would lead them to accept peace now, the slumbering war spirit of our ancestors now being aroused by the aggression of other peoples is likely to take a more or less permanent set, and indeed will of necessity require to do so if we are to be in a position to meet the fresh assaults on our existence as a nation which will assuredly follow in the not distant future.

One potent factor which seems always to escape the well-meaning world-pacifists is that so long as you have mankind divided up into different races, with different languages, different religions and traditions, different ideals, customs, and modes of thought, and different views of each other's importance in the scheme of things, so long will you have strife. This is no new condition, but it is one that must be ever reckoned with; it is the one from which this and all wars have sprung, and must be treated as permanent, so far as the shaping of our future action is concerned. This has been of necessity accepted by all progressive peoples and acted upon accordingly, with results varying as their relative skill and foresight.

In our case, Nature and a supreme Navy, which we have gradually come to assume as all that is needed to comply with this elemental necessity, has lulled us into individual detachment from world strife. So much so that even in the throes of a death struggle for existence we have one of the most amazing exhibitions of the workings of the human intelligence that history has to record. These means of self-preservation having failed as complete measures, the extraordinary question is under consideration as to who amongst us shall take on the burden of facing the enemy, who shall leave his private and business affairs to take up his long-neglected shield and sword in his own and his country's defence; shall every citizen as a matter of course be called upon to do what he is considered best fitted for in the crisis; or shall it be a matter of chance, left to the individual? Amazing indeed! The means hitherto considered sufficient for our self-preservation, if they have not already failed, will do so. Our magnificent Navy, as at present constituted, and the enveloping ocean will prove inadequate in themselves to our maintenance of power, by reason of the ingenuity of man in discovering new methods of exerting his offensive force and of overcoming all barriers to attack on his enemy's territory.

No matter what our scientific experts may have said about the limited possibilities of airships and aircraft generally, I think we are beginning to see that they are to be treated seriously. The whole science of aerial navigation is in its infancy, and anything is possible. Certain it

is that, as a barrier to serious offensive action on these isles, our sea power is within sight of failure—I don't say in this war, but we have already received notice and cannot afford to ignore it. If a commanded sea barrier, such as we have, fails, no country, however strong her land frontiers may be, is now immune from the attentions of the despoiler and violator from without.

The power developed by the skill and genius of the scientist and inventor in all directions, and now so evident in warfare, has brought about that great revolutionary change that puts a period to one epoch and opens up another. Do we realise what this means; that henceforth there is no distinction between civilian and soldier? Those glaring press headlines: "Barbarous attack on undefended port," "Zeppelin outrage on Tyneside: murdered citizens,"—these will gradually disappear when we awaken to their absurdity. As Monsieur Léché points out in his "Les Guerres d'Enfer," it is no longer paid professional armies that go out to do battle, whilst the citizen carries on his usual business, treating the campaign as a matter of interest in his moments of leisure. Henceforth, it is nation against nation in the literal and fullest sense. Whoever makes munitions of war: man, woman, or child; whoever clothes and feeds the fighters; the inventor, scientist, and financier, the brains directing operations, the payer of war taxes, the hewer of coal, everybody practically—all are belligerents and can no more expect to be immune from attack than the man in the trenches or on a destroyer.

Germany has shown the futility of treaties and international military laws. Make them by all means, and keep them if you can, but be prepared to meet those who don't on at least equal terms. The truth of the saying, "If you want peace, prepare for war" is being realised more and more as the days go on. The price of the most costly preparation to demonstrate our invincibility would have been as nothing to the expense we are now being put to to preserve our existence; but, above all, think of the outpouring of blood that would have been averted. See to it that the lesson is learned!

To meet the conditions of this new epoch, and as a matter of self-preservation, I unhesitatingly assert that the only way is to organise and encourage a universal military habit as part of our daily life. I can see the expression of horror on the faces of those good people who live in terror of "Militarism." I see nothing whatever to fear from the general training of the citizen to arms. It is the one sure way to kill "Militarism"; no longer would it be possible, even if it had ever shown itself in Britain, for an exclusive professional military class to dominate the nation. The nation itself would be the army, and would not lightly forsake its peaceful pursuits at the behest of the professional fighter. I see nothing but good in such a change. If it only bred in the individual a sense of the duty he owes to his country, a sense so many clearly lack, it would be well worth the loss of our so-called freedom. Militarism! A bogey! Are the French more bellicose than we? Does the average Englishman, trained to the scientific use of his fist, go blustering round to demonstrate his prowess, or is not his bearing that of a quiet confidence in his ability to defend himself or chastise any aggressor against the weak? What does England not owe to-day to the Volunteer and Territorial? I am very proud of my "T." and in all the years I have been associated with these civilians trained in military practices I have seen no shadow of the spirit of Militarism, but I have seen a marked improvement in the bearing of these men who have in times of peace voluntarily submitted to military discipline, which though limited was always

real. I have learned as I could never otherwise have done to appreciate the sterling qualities of the Northumberland miner. I mention the miner because my experience has been more with him than other classes. But artisan, labourer, miner, commercial and professional men, no matter what their class or *métier*, affect a *rapprochement* and mutual understanding by this military association which no other means so effectually afford. "You want peace, take it then," said Napoleon. Take it by your power to command it.

Interwoven through the fabric of national life must be an ordered arrangement for defence, which will be the motif of its pattern. But this new order of things must no longer be left to a few Government departments to deal with. It is everybody's business, and upon that fact being thoroughly grasped depends our existence as a first-class Power.

If we architects were suddenly called upon, as we very soon will be, so to shape the plans of our new public buildings and the laying out of new town areas with special reference to the demands created by the new conditions that are looming up before us, we would be somewhat non-plussed. These new conditions have not yet definitely taken shape in the minds even of those who are most intimately mixed up with the swiftly-crowding events that are in process of crystallising them. There are no Government departments to which to apply or from which have issued any regulations. These departments will materialise in due course, but on old methods they will prove too cumbersome, extravagant and inefficient. With a nation composed of individuals brought up to look upon personal liberty as the greatest heritage bequeathed them, free to follow any selfish inclination or ambition they choose, so long as they don't stand in the way of their neighbour doing the same—a people untrained to co-ordination of thought, without common ideals and without understanding as to the national duty that a modern World State of necessity imposes on its subjects—a people who are only spasmodically galvanised into a noisy display of patriotism by Press and paid politicians when events threaten a wound to their pride or a loss to their pocket—with such a people no new method is possible.

It is no use blaming the bad or indifferent work of Government departments. These you form, and having appointed officials you expect them to do all your thinking for you, so far as it concerns national business. Why are we criticising the conduct of the war by the men we have loaded with the responsibility for its successful prosecution? We are responsible. If one of your clients doesn't know his needs nor his means, and won't take the trouble to find out, he cannot blame you if the alteration and extension to his house are costing more than he can afford and are not to his liking. Conscription, national service, State organisation of men and material—call it what you will—we are told is contrary to the genius of our people. Then the sooner we take thought to ourselves and alter our genius the better, for I, for one, do not believe that our genius is incapable of the addition of a cubit to its stature by an effort of will.

If we continue for a time to succeed without this co-ordination of our activities in the direction that the obviously new order of world politics imposes, we will not have to congratulate ourselves on our perspicacity, but rather on the surprising fact that no other nation has seized upon the obvious means of extending its power. Be not deceived, however; you cannot stamp out in a generation or two the ambitions of a people, and the nation that has been the means of making this national unity of thought and action

a necessary weapon of defence on the part of other peoples will not lightly drop it as a weapon of offence because it may have failed on its first use. It is only a matter of time, and the weapon will have been given a keener and more deadly edge. Again let me say it: Not kings, not princes, not armies, but nations are at war as they never were before. You and I and everybody are called upon to fight our present enemy, and will never again be able to entrust the work to a small section of the community called the Army and Navy, magnificent as ours have shown themselves to be. A revolution in educational methods will have to follow. The rising generation must be gradually brought to assimilate the idea of individual responsibility in national action, to develop a sense of pride of country and a willingness to self-sacrifice in defence of her honour.

We have already reached a stage when we consider it necessary in the interests of the community that everybody should be held responsible for the observation of recognised hygienic laws against disease. We are taught the value of fresh air and exercise, treatment of water and milk, burning of organic refuse, destruction of flies and other disseminators of contagious matter: in short, how to combat the destroyer of health and life. And yet we are content to be ignorant of the first essentials in the defence not only of life, but of what is more dear than life: honour, home, country.

Official departments, without the co-operation of the community, would ill combat epidemics of disease. No better will they succeed single-handed against our more deadly foes. Familiarity with the ever-changing conditions of warfare will be an essential part of education for the youth of both sexes. The weapon of the future will be a properly directed national intelligence—it will be mind against mind. The destroying gas waves, the flying shell, the bursting shrapnel, the death-spitting missiles from Maxim and rifle, the mechanical vultures and mosquitoes of the air, the engined destroyers of the deep, the burrowing atoms of humanity, sapping their way to each other's vitals—all will be but as the flying electrons from the radium of the nation's brains. In the mountain of pitchblend that is the British Empire we have untold stores of the radium of intelligence, but it must be extracted to be of use, and that cannot be done without the proper plant. Set up the plant in every school and university, in every home and institution, in every Church; preach familiarity with every weapon that may be used in our country's defence, so will you have peace and the calm to nurture those Christian virtues she holds up as her ideal.

When our foes are beaten to earth and the sword is sheathed we architects must be in the forefront of those who lay the foundations of this remodelled national structure. Let us be the first to formulate plans for its extension and alteration, such as will condemn all decayed and useless parts, preserving only the firmly based and soundly constructed core, in which are preserved the glorious traditions of a thousand years.

In this new national structure the ideal to aim at, it will be agreed, is to construct it and maintain it by the best intelligence available. It cannot be contended that this is the basis on which is reared our existing national and local government. Suppose it is contended that it is fairly representative of the average intelligence of the people. That is not enough. However equitable it may seem to give an equal vote to every man (and woman if you will), an equal right to say how we must proceed; such a method is unsound and illogical, seeing the immense gulf that separates the intelligence and character of one individual

from those of another. The noblest and best must rule in the new State, not the average. A beautiful theory, but how is it to be applied? It is a difficult problem, I admit. Perhaps you will say it is impossible. Then I would remind you that, as one of our French friends says in speaking of war operations: "Il n'y a que l'impossible qui réussisse." Who amongst us in his small way but has felt the thrill of exaltation at having achieved the apparently impossible? It may take generations to accomplish it, and it will require the application and genius of many brains to solve it, but the sooner it is commenced the sooner shall we see the fruition of our efforts. The flood tide in the affairs of this nation is approaching which, if seized, will bear us on to fortune.

Let me compress this nebulous idea into some semblance of form, feeble though of necessity it must be, lest I be accused of empty phrasing. Let me, as an example, take our local government, and suggest how the best intelligence of our city might be applied: To begin with, there would be no room in my new Council for the man whose only qualifications are leisure, ambition, a ready tongue, a fat purse, or personal interest to serve.

I know that we have, and in almost any system might have, men of wide experience and intelligence and lofty motives on local councils. Indeed I think we are more fortunate in this respect than in many districts. But the system is too haphazard; there is a lack of balance in the character and experience and order of intelligence forming the combined wisdom of our rulers. The wisdom is representative of the Council's members, not of the highest intelligence of the citizens.

Say there are forty members required. If you take at random forty good average citizens, you have a council equal to most elected on the present system. Each will express his own views, or at best what he conceives to be those of the class from which he is selected, not the studied views of the best thinkers of that class upon city affairs. A new way of representing what I hope will be in the future the co-ordinated intelligence of the community on the council must be found; and to clear the ground for a reconstructed system I would wipe out ward representation and the voluntary representative. What would I substitute, and how? Well, the necessary machinery for my new system, with a little development, is already in existence. Instead of making use of the ward divisions, divide the population into sections, each representative of one of the various interests which form the life of the city. These sections or "interests" are nearly all defined and more or less organised in their respective associations or unions. How many branches of activity would thus be represented would depend upon the size and character of the community concerned; for instance, the shipping interest might be very large in one place and non-existent in another. Having settled on the number of "sections" in any district, each qualified elector would by right be entitled to become a member of that which he considered most nearly represented his business or "interest." Each section or "interest" might supply a representative to the Council, whose duty would be to advance not his own personal views on vital questions affecting the city's welfare, but the studied view of his "section" arrived at through its committee and council. These representatives might be paid permanent officials of their societies, Presidents, or members specially selected for their peculiar fitness, acting for longer or shorter periods as the exigencies of the city work required. The size of the Council could thus be reduced, for though it might be considered that one "interest" being

so large compared with another should have a larger say in local affairs, this could be done by giving increased voting power to the representative of the greater.

The local authority would then be a collective organisation at its best, composed of representatives of all branches of local activity: military, educational, legal, financial, commercial, labour, medical, architecture, and building, engineering, social, religious, etc., etc., all giving the result of co-ordinated effort in their respective spheres to the furtherance of communal interest and advancement. There is no individual citizen that could not be included in at least one of say fifteen to twenty such "interests."

It would be the duty of each of these societies or "interests" to form what I might call a "Foresight" Committee devoted to the study of the changing conditions affecting their special spheres of activity and their possible influence on the affairs of the community generally—to anticipate events and formulate proposals to meet them, and to confer with similar committees in other sections, finally voicing the result of their deliberations through their representative.

All this would of course involve a decided change in the attitude of the individual towards public affairs; but unless this does take place no improvement is possible. The lethargy and indifference of the average citizen is indisputable, but it is largely due to lack of any organised method whereby value can be given to his active interest, and I believe that, apart from the urgent necessity of greater interest in public work, our best men, under a system where they are assured of being able to exert their influence, would find a keen zest in using their knowledge and experience for the general weal.

These "sections" would no doubt require considerable reorganisation to adapt them to the new conditions. Our Society, for instance, while the purely professional work could proceed more or less as at present, would require to extend its activities and make its members realise the obligations of their citizenship. Matters of public concern generally would have to come within their purview. There is no doubt that such an extension of activity would react very favourably on the professional side of the Association, quickening the interest in all directions.

What a field for the imagination of our "Foresight" Committee would open up; what opportunities for the application of this gift in the reconstruction of our cities. I can hear some city father saying: "We don't want the dreamer and the visionary on our councils; we want the practical man." My answer to that is that, in my opinion, the one man on committees (building committees, at any rate) who is a real drawback to the satisfactory prosecution of any work is the so-called "practical man." He is usually a man of very limited, if practical, knowledge; unimaginative and of very narrow outlook, fearful of losing caste amongst his confrères by admitting any inferiority of knowledge, and whose influence, if allowed play, is more often than not reflected in inferior, uneconomical and inefficient work, barely sufficient for the needs of the moment and showing no intelligent anticipation of the needs of the future. We have plenty and to spare of these men; we want the man of imagination to give some idea of what may be demanded in the future from the work of the practical man of to-day.

It might be possible to extend some such system as I have sketched so roughly to national government. Nearly all the societies and unions throughout the country are affiliated to or together form national or central societies which might, by their respective representatives, form a much reduced and more efficient parliament.

But whatever system the genius of the people may devise for the utilisation of its best brains, we must not wait till the change is accomplished. We must begin to think now, so that when the present crisis is over such action can be commenced as will add its quota in bringing it about. Pending the arrival of that more enlightened time, we, like all other already organised societies, might start by forming our "Foresight" Committee, and, in season and out, use every endeavour to enforce our right to being heard in the local councils on matters where our special training and experience must of necessity be of value to the community. We must no longer be satisfied with the laying of our communications on the table, and our views treated with suspicion as emanating from an interested source. We must learn to command respect by showing that our actions are dictated by a desire to further the general good and not to pander to selfish interests.

In the time to come, when the national life is permeated with the spirit of patriotism—the real patriotism of service to country—and a determination to put down with force if necessary any signs of aggression or despotism on the part of other nations, such problems as we are now called upon to face will look after themselves, for then they will be constantly, and as a matter of course, under consideration as an essential to the nation's position in the world. But, in the meantime, the first and greatest problem that we must take up is how to shape our future plans to meet the danger that in a few generations will again confront any nation unprepared to defend itself against the new forces that will be employed by the enemy bent on conquest. Our "Foresight" Committee might well commence by studying the effects of the military offensive against cities that is just beginning to develop. This opens up a very large field for thought and ingenuity. Building construction must be considerably modified. The planning and general form of public buildings will undergo an appreciable change, and indeed the whole design and appearance of cities will alter, not only in the normal way due to the advance in scientific and industrial methods, but directly to the growing power and destructiveness of outside attack, chiefly from overhead.

I can see the gradual increase in the proportion of open spaces; the general introduction of underground or double-decked roadways, with their solution of traffic problems combined with safety for the population; the general adoption of covered and arcaded footways on the lines of the Ritz Hotel, Piccadilly, having easily actuated steel shutters; the general return to shuttered windows of special design, and the entire absence of inflammable material where exposed to incendiary attack; tiled and slated sloping roofs entirely abandoned in favour of very strong flat roofs specially adapted for anti-aircraft appliances, and, in the case of large or continuous blocks of buildings, without parapets and specially prepared for the landing and housing of avions. I can imagine the national treasuries being remodelled; picture galleries with suspended wall linings on which the pictures are fixed, and which could be swiftly dropped to their safety vaults below; museums

with their cases of treasure, their statuary, and so forth, arranged on continuous lift platforms similarly capable of being lowered to a place of safety by the pressing of a button; schools and similar public buildings so modified as not only to show the large part that national service in its wider sense plays in education, but also to make them immediately available for the accommodation of the citizen in arms at the signal of alarm; manufactories, where the worker on mobilisation orders becomes a soldier with his allotted place, so arranged as to become his quarters in war until required elsewhere; the creation of new types of buildings and athletic areas for the systematic training of the citizen soldier, and the education of the woman in her important duties in time of war. I can also imagine a network of subways linking up important centres, and the permanently constructed and well equipped trenches protecting the great industrial centres; great electric generating stations entirely underground, supplying the lighting and motive force for industrial, domestic, recreative and war requirements; great Government laboratories for scientific and engineering research; and so on, and so on. Each thinker according to his knowledge and imaginative faculties can make a mental picture of the aspect of future centres of life—all probably very wide of the actuality, but none more widely divergent than will be the change from the present state of affairs.

A "Foresight" Committee's duty should be to be, if anything, in advance of the times, in order that our progress shall march with the ever-changing conditions and requirements of the life of the new epoch.

Now, gentlemen, I must cease flicking the surface of this vast problem and leave you to go deeper if you will. I cannot expect you all to agree with my theme; I should even be prepared to hear the opinion that I had abused my position in voicing such views before a professional society. Yet I make no apology for so doing, for at such a time as this I feel perfectly justified in attempting on any available occasion to influence others to an earnest consideration of what I feel to be a vital matter to the nation first and to us as architects afterwards. If I arouse active opposition to some of my beliefs I care not so long as I succeed in stimulating an interest that may bear fruit in action when the fast approaching time arrives. Until then let every ounce of our combined weight be hurled against our foe. In every way possible let all of us, old and young—for remember we are now all belligerents—emulate the courage and patriotism of those who are bearing the heat of the battle. Of our members and those who have been connected with us no fewer than sixty are with the Forces; many have been wounded, and, alas! we have to record the supreme sacrifice to King and Country of four great souls whose memory will live on and add their lustre to our annals—George E. Hunter, A. E. Lowes, R. Mundle, and F. Lawson are gone from amongst us, and yet are they not to be envied—for

*"How can man die better than in facing fearful odds
For the honour of his country and the temple of his gods?"*

REVIEWS.

TOWN PLANNING.

The Case for Town Planning: a Practical Manual for the use of Councillors, Officers and others engaged in the preparation of Town Planning Schemes. By Henry R. Aldridge, with an appendix by Frank M. Elgood, F.R.I.B.A., and Edmund R. Abbot, Solicitor. 15s. net. [National Housing and Town Planning Council, 41 Russell Square, W.C.]

In presenting the Case for Town Planning it is obvious that at the outset the evils of the "let things go as they please" system must be exposed and remedial measures outlined. The exposure might take the form of a strongly worded denunciation of the cast-iron by-law system which resulted from the passing of the 1875 Public Health Act, with incidentally a reference to the industrial régime which preceded and developed along with it. But Mr. Aldridge is something of a politician, and too far-sighted to accept so narrow a view of the causes responsible for this modern recrudescence of an interest in towns and town planning. On the very first page of his book he strikes the right note when he urges that the appeal to history in favour of present town-planning action should not be under-estimated, and so the first part of his work is devoted to an historical review.

Mr. Aldridge is a lover of anecdote, and if he has lacked the opportunities of the professional historian for continued study and research he makes good his shortcomings by treating the reader to an amazing selection of quotations and extracts from the writings of accredited authors, whose names range from Aristotle to Charles Dickens, and it is in the priceless selection of these utterances that he is revealed to us at his best. This treatment is consistent with his honest appreciation of the work of others, and of their contrasted opinion as presented in this way. And so his history of Town Planning must be read not as a new and final pronouncement of mere historic worth, but rather as an explanation of the complexities and difficulties that have had to be contended with by those who have been responsible for the development of towns.

After reviewing the conditions which produced the chessboard plans of Greek and Roman colonial cities, he dwells with increasing interest and at greater length upon the development of the mediæval town. Here he very ably traces the growth of the free city of the fourteenth century, with its superlative architecture and bourgeois control, from the feudal castle with its surrounding hamlet dominated by a feudal lord. Discussing and explaining the meaning of the Renaissance, he refers the reader to Aristotle's *Magnificent Man*, from which he takes a lengthy extract. This in itself convinces us of his true insight into the essentials of the period. He devotes considerable space to the eighteenth-century planning of London, Edinburgh and Bath.

Indicating as he does distinct traits of the individualist in his writing, one is disappointed to find

that he refrains from venturing upon a personal criticism of Haussmann's work in Paris; instead, he depends upon a descriptive extract from the pen of Professor Abercrombie which has appeared in the *Town Planning Review*. But particularly valuable in his chapter on nineteenth-century planning is the part devoted to town planning in Germany after the 1875 Prussian Act. In his review of American planning one cannot help feeling that he makes a mistake in describing New York's chessboard plan as the worst example of the kind. Manhattan Island, with its elongated shape, is on the other hand probably the best shaped of all sites to receive such a plan.

His chapter on "The Neglect of Town Planning in Great Britain throughout the Nineteenth Century" gives him an opportunity for indulging in brilliant invective, and his description of the towns which grew up during that period, and which he supplements with extracts from the writings of Charles Kingsley in *Alton Locke* and of Charles Dickens in *Coke Town*, reminds us that there were men living at that period who were as alive to the degrading influence of the conditions of existence around them as are we to-day. In a later chapter he supports this outcry with the help of a convincing assemblage of statistics.

He next deals with the legislation of this period, and, reviewing the Public Health Acts which led up to the important Act of 1875, he says of the sanitary reformers who introduced it: "A deep debt of gratitude is due to their memory. They succeeded in placing Great Britain in the forefront of the nations as far as sanitation is concerned." But this must be read in conjunction with a later remark, where he says: "A bad process of by-law development was in effect evolved, which may be thus described. A board appeared in a green field notifying the fact that desirable building land was for sale. After a lapse of years the board was taken down, and the builder appeared to start the process of development, and finally streets of houses, all ugly and all alike, appeared."

He gives the credit for having first instituted a movement in favour of English Town Planning legislation to Mr. George Cadbury and Sir William Lever, and traces its rapid development through the inspiring influence of Ebenezer Howard up to the passing of the Act of 1909, and thus brings to a conclusion the first part of his work.

The second part he devotes almost entirely to an explanation of the powers contained in the Town Planning Act, to a survey of the various stages to be reached in the preparation of a "Scheme," and to a critical review of the Ruislip Northwood and Birmingham schemes. These are fully presented, accompanied with maps and a recitation of their general provisions, annotated and explained. In this part of his work he has no doubt been valuably assisted by his able collaborators, Messrs. Elgood and Abbot. Throughout this second part of the book no opportunity has been missed for enlarging upon the possibilities afforded by the Act for providing better

housing for the working classes. And although some might say that the housing question has been over-emphasised in a book devoted to Town Planning, at the same time such a digression is quite pardonable, and indeed acceptable, from one whose knowledge of housing conditions must be regarded both as unique and exceptional.

The book, which is copiously illustrated and which runs into some 670 pages of small print, does full justice to its somewhat ambitious title. It may be said that it is far-and-away the best work that has yet been produced on the practical application of Town Planning, but in making this statement and in realising the tireless energy that has been expended in clearing up every complexity that is likely to arise in the working of this most complicated of Acts, the Town Planning Act, one cannot help feeling that there is still room for other works on the same subject written from a different and perhaps more architectural point of view. The tangle of technicalities which it discloses and which are unquestionably contingent upon the preparation of every "Scheme," suggests that the pitfall of those who merely depend upon their mastery of law, and who rely upon a series of carefully drafted protective clauses in preference to venturing upon the making of a boldly conceived and imaginative scheme, will be the setting up of a more imperious control of development, which in its final result will be found to have been still proceeding in the old haphazard way.

S. D. ADSHEAD [F.].

DESIGN OF STEEL SHEDS.

The Practical Design of Steel Framed Sheds. By Albert S. Spencer. 8o. Lond. 1915. 10s. 6d. net. [Constable & Co., 10 Orange Street, Leicester Square, W.C.]

This work is for the greater part devoted to the methods of designing steel sheds with roofs of varying spans. Tables are given of unit stresses and of the sections of the various members of the trusses and necessary stanchions. The explanation of methods of calculation has been most fully carried out and should be of great assistance to architectural students.

The latter part of Chapter VI, dealing with "Choice of Sections" and "Factors which Affect Design," and Chapters VII and VIII contain many useful notes on practical points, but the shearing-stress on rivets and bolts, given on page 130 as 7 tons per square inch, is much too high. This stress is limited in the L.C.C. (1909) Act to 5½ tons per square inch.

A work of these dimensions might usefully have given a greater variety of types of trusses. The trusses dealt with are all variations of what is generally known as the French truss.

FRANK N. JACKSON [Hon. A.].

Books Received.

Lennox Abbey in the Parish of Krith, Kent. By Alfred W. Clapham F.S.A. Report of Investigations, Architectural and Historical, carried out by the Woolwich Antiquarian Society, 1909-13. 4o. Lond. 1915. With numerous illustrations. 10s. 6d. net. [The Cassio Press, 5 Lamb's Conduit Street, W.C.]



9 CONDUIT STREET, LONDON, W., 18th December 1915.

CHRISTMAS GREETING TO ARCHITECTS ON SERVICE.

May I be allowed, in the name of the Council of the R.I.B.A., to send a message of affectionate Christmas greeting to all Architects serving with the Colours. We want them to know that we are proud of them, and that they are always remembered.

I should like, too, to assure the parents of those who have fallen of our deepest sympathy. They have the consolation of knowing that these promising young lives have been sacrificed in performing the noblest duty which a man can be called upon to perform; and, although we know that their grief is incurable, we hope that their legitimate pride and the knowledge that the memory of their dear ones is enshrined in the hearts of their fellows will in time be a solace to them.

ERNEST NEWTON,
President R.I.B.A.

CHRONICLE.

R.I.B.A. Record of Honour : Twenty-first List.

Killed in Action.

BOWNASS, JAMES EVERETT [A.], Princess Patricia's Canadian Light Infantry. At first reported "Missing," and now reported to have been killed in the trenches at Bellegarde Wood, near Hooze, in Belgium, on the 8th May.

PHILIPS, ARTHUR MAXWELL [Licentiate], Captain, 11th Batt. K.O.Y.L.I., attached 9th West Yorks. Regt. Killed in action in Gallipoli on the 11th November 1915, aged forty-seven.

A. M. Philips was the youngest son of the late Charles Frederick Philips, Solicitor, formerly of 44 Lincoln's Inn Fields, and a grandson of the late Major Roger Lambert Lewis, of H.M. 20th Regt. of Foot (who took part in the Retreat from Corunna, the Walcheren Expedition, and the Peninsular Campaign, and was wounded at Pampeluna, 1813). He was born on the 7th October 1868 and was educated at Kensington Grammar School and Merchant Taylors' School, London. On leaving the latter he entered the office of the late Mr. J. J. Stevenson,



SPENCER ELLWOOD BARROW, *Associate*,
Lieut., 5th Bn. King's Own Royal Lancaster
Regiment.
Died of wounds (see pp. 26, 55).



EDMUND HERBERT GIBSON, *Associate*.
Lieut., Royal Naval Volunteer Reserve.
Died of wounds (see p. 49).



EDWARD GEORGE DAWSON FROMANT, *Probationer*,
Lance-Corpl., 1st City of London Sanitary Compy.,
R.A.M.C.
Died of wounds (see p. 49).



JAMES BERNARD MILLARD WALCH, *Student*,
2nd Lieut., 2nd Royal West Surrey Regiment.
Killed in action (see JOURNAL, 16 Oct., p. 59),
and present issue, p. 71).

F.R.I.B.A., with whom he remained for some years, and after brief periods of service subsequently in the offices of Messrs. Read & MacDonald and Mr. J. M. Brydon, he entered the Architects' Department of the London County Council in 1893, being attached at first to the Housing and then to the Escape Section, and eventually becoming a Senior Assistant in the latter. For some years he held a commission in the 17th Middlesex Rifles (Volunteers), retiring in 1902, at which date he held the rank of Captain: and on the outbreak of the War, being then a member of the National Reserve, he at once offered his services to the War Office. He was gazetted (Temporary) Captain in the K.O.Y.L.I., under date 18th November 1914, and served at Harrogate and elsewhere with different battalions of his regiment. In July last he took a draft to France, but to his keen regret his military duties did not permit of his accompanying it to the front. Shortly after his return he was attached to the 9th Batt. West Yorks Regt., and in September he embarked for the Near East with a detachment of that regiment. A few weeks after reaching the Dardanelles he was killed by the bursting of a shell on the roof of a dug-out in which he was at work. He was an ardent supporter of the Society for the Protection of Ancient Buildings, and had served for some years on the Committee of that Society: while in other directions his energies found an outlet in much good work in connection with the L.C.C. Rifle Club and the Trinity College, Cambridge, Mission Boys' Club at Camberwell. Keen, capable and amiable, Arthur Maxwell Philips will be deeply mourned in all the circles in which he moved. R.I.P. D. R. CRAWFURTH SMITH.

Wounded.

HORSNELL, ALICK [*Soane Medallist* 1910]. Wounded in left thigh, and now in hospital at Cambridge.

Enlisted in H.M. Forces.

The following is the Twenty-first List of Members, Licentiates and Students who have joined H.M. Forces for the period of the War, the total to date being 51 Fellows, 373 Associates, 196 Licentiates, and 239 Students:—

FELLOWS.

Deacon, Basil C.: Captain, 2/1st Field Co., North Midland Div., R.E.
Heath, J. S.: R.N.A.S. (A.A.C.).

ASSOCIATES.

Bridgen, Chas. H. E.: 2nd Lieut., Kent (Fortress), R.E.
Chamberlain, R. P.: 2nd Lieut., 3/1st West Riding Divisional, R.E.
Elkington, G. Leonard: Artists' O.T.C.
Hebblethwaite, B. R.: Lieut., 2nd London Sanitary Co.
Hooper, Harold R.: 2nd Lieut., 4th Bn. Suffolk Regt.
Kennard, J. Harold: 2nd Lieut., 3/3rd Kent Field Companies, R.E. (T.F.).
Penfold, John T.: Surveying Section, R.E.
Warren, Henry G.: 28th County of London Regt. (T.F.).
Webb, Philip E.: London University O.T.C.
Wilshire, R. S.: Artists' Rifles.
Wingrove, G. C.: 2nd Lieut., R.F.A.

LICENTIATES.

Andrews, Arthur G.: 2nd Lieut., Kent (Fortress), R.E.
Croft, Christopher: Lieut., R.E.
Etherington-Smith, H. L.: Lieut., R.A.M.C.
Falconer, Lake: 4th Highland Mountain Brigade, R.G.A.
Hill, Reginald J.: Anti-aircraft Corps.
Tomkins, S. E.: Artists' Rifles.
Watson, Henry B.: 6th Canadian Field Engineers.
White, John: Inns of Court O.T.C.

STUDENTS.

Athron, T. Sydney: 2nd Lieut., 21st West Yorks (Pioneer) Regt.
Caley, Walter H.: 2nd Lieut., Queen Victoria Rifles.

Edwards, J. Ralph: 2nd Lieut., Glamorgan R.G.A.
Fox, A. R.: London Rifle Brigade.
Taylor, R. V.: 2nd Lieut., East Riding (Fortress), R.E.

Notes re Members on Service.

MR. BASIL C. DEACON [F.], of Luton, Beds., who was given a Second Lieutenancy in the 2/1st Field Co., North Midland Div., R.E., in July last, was gazetted on 4th November Senior Captain of the same regiment.

MR. LESLIE BAREFOOT [A.], formerly of the R.N.A.S. and of the Inns of Court O.T.C., has been gazetted Lieutenant, R.A.M.C. (T.).

Subscriptions of Members Serving with the Forces.

On the recommendation of the Finance and House Committee the Council have decided to remit the subscriptions and contributions due on 1st January 1916 of all Members and Licentiates serving with H.M. Forces who make written application for such remission prior to 1st July 1916.

British Red Cross Society.

Commandant Ambrose W. Coffin writes:—A Men's Red Cross Voluntary Aid Detachment has been formed by the members of the Architectural Association at Tufton Street, Westminster; and is now recognised by the War Office. There are still some vacancies for men ineligible for the Army and those who have attested under Lord Derby's Scheme; for the latter the Detachment should prove useful as a preparation for the R.A.M.C. The Detachment will welcome any such applicants, and anyone wishing to join should communicate by letter with V. Wilkins, Quartermaster, at 12 York Buildings, Adelphi. The work is entirely voluntary and includes transport work at London Termini, Orderly duty at various V.A.D. Hospitals in Westminster, and Air Raid work. A fresh course of Lectures will commence immediately after Christmas. As this is the only Detachment in the Westminster Division its services are much in demand.

Recruiting Officers' Advisory Committees.

A copy has been received of the supplementary Memorandum issued by the Parliamentary Recruiting Committee on the constitution and duties of the local Advisory Committees for the assistance of the Military Authorities in cases coming before the local tribunals.

The Advisory Committee will be appointed by the local Parliamentary Recruiting Committee. One or two members of that Committee should in every case be on the Advisory Committee, in order to keep in touch with the Parliamentary Recruiting Committee. Some members of the Advisory Committee should be representative of the chief industries in the locality. The Committee should be small, not more than five members. In no case should a member of the Local Tribunal be a member of the Advisory Committee.

The general scheme is that as far as possible the Advisory Committee should keep closely in touch with representatives of the chief industries of the locality. In this way the services can be obtained of representatives both of employers and of employed persons

who are recognised as being impartial, and who should, if possible, be actively engaged in the trade or industry under consideration.

Provision is further made for the appointment of Advisory Sub-Committees in special areas. The Advisory Committee will mainly deal with (1) claims for the postponement of the calling up for service of a man who has been attested and passed to a group in Section B Army Reserve, and (2) questions relating to a man who is actually engaged in a starred occupation but who has not been starred. Cases of these two classes will be notified immediately to the military representative. He will consult his Advisory Committee, and it is his duty to inform the Local Tribunal within seven days after the receipt of such notification whether or not the application is assented to. If it is assented to, the case will not be gone into by the Local Tribunal, but the decision of the military representative acting with the Advisory Committee will be given effect to. If the Advisory Committee considered an application to be reasonable, the military representative in most cases would be able to inform the Local Tribunal that he assented to the application. There may be a large amount of work to be got through, but it is hoped that, with the assistance of the Advisory Committee in sifting out cases which need not be contested by the military representative, no Local Tribunal will be overburdened.

Architects and the Income Tax.

No reply having been received to the letter addressed by the President R.I.B.A. to the Chancellor of the Exchequer (printed in the JOURNAL for 6th November, p. 9) the following further letter was sent:—

15th November 1915.

To the Rt. Hon. R. McKenna, P.C., M.P.,
Chancellor of the Exchequer.

SIR,—The President of the Royal Institute of British Architects desires me to say that his Council will very greatly appreciate a reply to his letter of October 25th on the subject of the income tax paid by Architects. They realise the heavy burden of public business which is now imposed on the Ministers of the Crown and they are anxious not to add to it unnecessarily, but at the same time they feel that it is most urgent that the attention of the Government should be called to the painful position in which so many members of the architectural profession will soon find themselves unless steps are taken to relieve them from the payment of income tax for a period during which they have earned nothing. The fact that their difficulties are—no doubt unavoidably—the direct result of the Government's action in stopping building operations affords an additional reason for special consideration being granted to them.—I have the honour to be, Sir, Your obedient Servant,

IAN MACALISTER, Secretary R.I.B.A.

The following reply has been received:—

Treasury Chambers, Whitehall, S.W.

26th November 1915.

To the Secretary, Royal Institute of British Architects,—

DEAR SIR,—With reference to your letters of the 15th instant and 25th ultimo on the subject of Income Tax, I

am desired by the Chancellor of the Exchequer to say that for the purposes of taxation it would not be practicable to draw distinctions between the various classes of businesses which in different ways have especially suffered from the War, or to say how far the income of one or another had been directly affected by Governmental action.

Individual cases of special hardship cannot be provided for by legislation, and it is suggested that as and when they arise they should be brought to the notice of the Board of Inland Revenue with a view to any such postponement of payment as in the circumstances it may seem fit to allow by administrative action.

I am to add that the tax payable for future years would, of course, be affected by the inclusion in the average of the small profits of the years of depression.—Yours faithfully

H. P. HAMILTON.

Metropolitan Water Board and Overflow Pipes.

The following correspondence has passed between the Royal Institute and the Metropolitan Water Board on the subject of the latter's requirements as to overflow pipes to baths and lavatory basins:—

9 Conduit Street, W., 24th April 1914.

To the Secretary, Metropolitan Water Board,—

SIR,—My Council have had brought to their notice the requirement of the Metropolitan Water Board that any overflow from a lavatory basin shall be constructed only as a warning pipe, as in the case of the overflow from a bath (Regulation 25).

Objection is raised by the Board to such overflow being connected to the waste pipe in cases where the waste pipe is connected (as is now usual in good work) with the back inlet of the gully. It is necessary, the Board contend, for any such waste pipe to discharge over the grating of the gully, where any waste can be readily detected by their Inspector. If this method be not possible one of the two following alternatives is demanded: (1) that the overflow shall be kept separate from the waste and discharge separately into the open as a "warning pipe," or (2) That the lavatory basins shall be fitted with self-closing taps instead of the usual screw-down type.

As far as can be ascertained this "requirement" is at present being demanded only in the area formerly served by the New River Company, but it is understood that it is proposed in the near future to apply the "requirement" to the whole of the area now served by the Board.

It has been pointed out that Regulation 25 applies only to overflows from baths, and that there is no similar Regulation applicable to lavatory basins or sinks. I have also to point out that the second alternative demanded by the Board, viz., as to self-closing taps, is in direct conflict with Regulation 18, which requires all draw-taps to be of the "screw-down" kind. These self-closing taps are most inconvenient to the user, and if they are insisted on, simple devices will undoubtedly be used to keep open the taps, with probably greater waste than screw-down taps to which the users have been accustomed, and their use sooner or later results in damage to and bursting of lead supply wires, causing further inconvenience and damage, and waste of water.

As an indicator of waste of water the separate overflow fitted as a "warning" pipe is of little use; it only indicates a leakage from the taps in the rare cases where the plug has been replaced in the outlet of the basin after use, and then only after the basin has filled. If the plug be left out, a

condition that appertains practically without exception, any leakage naturally finds its way through the waste pipe, the "warning" pipe doing no duty.

My Council wish to call the attention of the Metropolitan Water Board to these facts and to express a hope that the Board will not press this requirement as to wastes to lavatories, as its members, who follow closely the published authorised Regulations when work is being executed under their direction, resent objection being taken by the Board to work and fittings that are clearly not contrary to the authorised Regulations, and nothing is more calculated to engender a spirit of antagonism, which cannot be regarded as desirable from the point of view of either the Board or the Architect.—I am, Sir, Your obedient Servant,

IAN MACALISTER, *Secretary R.I.B.A.*

*Metropolitan Water Board, Savoy Court, Strand, W.C.
5th August 1915.*

To the Secretary R.I.B.A.,—

SIR,—Adverting to your letter of 24th April 1914 I have to inform you that the Works and Stores Committee of the Water Board, after full consideration of the subject, have resolved that the Board do offer no objection to overflow pipes from lavatory basins discharging into the waste if used in conjunction with screw-down taps or self-closing spring valves.—I am, Sir, Your obedient Servant,

A. R. PILLING, *Clerk of the Board.*

9 Conduit Street, W. : 2nd Nov. 1915.

To the Clerk, Metropolitan Water Board,—

SIR,—Your letter of the 5th August has now been submitted to the Council of the Royal Institute of British Architects, who have directed me to ask you to be good enough to express to the Works and Stores Committee of the Water Board their appreciation of the decision which has been arrived at. They will be glad to know whether they are right in assuming that this ruling applies to baths as well as to lavatory basins.—Faithfully yours,

IAN MACALISTER, *Secretary R.I.B.A.*

Metropolitan Water Board: 30th Nov. 1915.

To the Secretary R.I.B.A.,—

DEAR SIR,—In reply to your letter of the 2nd instant, I am directed by the appropriate Committee to inform you that the Board's permission for overflow pipes from lavatory basins being discharged into the waste, if used in conjunction with screw taps or self-closing spring valves, does not apply to baths.—Yours faithfully,

A. R. PILLING, *Clerk of the Board.*

The Camps Library: Books and Workers Wanted.

From the Board of Education has been received a copy of a circular to Local Educational and other authorities, briefly outlining the work of the Camps Library and suggesting methods of co-operation on the part of competent volunteer workers. The Library sends books to all the units of the Army and to Camps at Home and Abroad. It acts as a receiving depot for the War Library (which supplies books to military and naval hospitals and hospital ships), the Fleets, the Prisoners of War Help Society, the huts of the Y.M.C.A., and generally all organisations for collecting and distributing books and magazines approved by the Admiralty and War Office. The demand for good fiction continues unabated, but there is also a demand,

not as yet adequately met, for books of a more solid character, such as historical and scientific works, poetry, essays, works on economics, biographies, pocket dictionaries and grammars (particularly French and German), volumes of well-known series such as The Home University Library, pocket Shakespeares, text books on mathematics and science. Books should be of a small size, in good condition, and complete in one volume. They should be sent through the Post Office, or handed in over the counter of any Post Office. What the Camps Library would most value would be organised efforts among volunteer workers in each area to give advice and guidance to intending donors as to the kind of books likely to be suitable and to supervise the supply so as to eliminate obviously unsuitable books. The Board of Education will supply copies of this circular on application.

R.I.B.A. Belgian Architectural Records Sub-Committee: Second Interim Report.

The Belgian Architectural Records Sub-Committee appointed by the Literature Standing Committee beg to acknowledge the receipt of the following further gifts since the publication of the previous list in the JOURNAL of 25th September:—

29. The Rev. W. HARDY HARWOOD (Mill Hill):
1 small photo and one postcard view of Dinant.
30. Mr. W. H. THORP, F.R.I.B.A. (Leeds, the Author):
"An Architect's Sketch-Book at Home" (1884), containing, *inter alia*, 33 sketches in Belgium.
31. Mr. C. A. MILLARD (Ealing):
"The Stranger's Guide to Brussels" (? 1869).
32. Mr. JOHN BILSON, F.S.A., F.R.I.B.A. (Hull):
3 sheets of original sketches in Dixmude, Nieuport, and Ypres.
33. Mr. C. HARRISON TOWNSEND, F.R.I.B.A.:
Etching of Antwerp by Axel Haig.
34. Mr. ELLIS MARSLAND (Camberwell):
2 measured drawings and 24 mounted photos of the Hôtel de Ville at Audenarde.
2 original sketches and 8 mounted photos of Audenarde and Ypres.
35. Lady CLARKE JERVOISE (Thrapston):
7 photos of Antwerp, Bruges, and Brussels.
36. Mr. E. HADREN PARKES:
C. Verschelde's "The Ancient Domestic Edifices of Bruges" (Bruges, 1875).
Small guidebooks to the Hôtel de Ville, Brussels (1903), and the Grotto of Han (1900).
37. Mr. HAROLD W. ATKINSON (Northwood):
Print by Verbruggen of pulpit in S. Gudule, Brussels.
38. Mr. E. J. MAY, F.R.I.B.A.:
Large mounted photograph of the Cloth Hall at Ypres.

MARTIN S. BRIGGS [A.].

3rd December 1915.

Hon. Secretary.

Edwin Richard Hewitt [A.].

Edwin Richard Hewitt, whose death occurred on the 13th October from heart failure following an operation, came of an old Northamptonshire family. Born in 1850, he was educated in his father's school, and was for a short time with Messrs. Jones & Son, builders, of Gloucester. He gave early proof of artistic ability, and at the age of twenty-one was articled to Mr. J. Walford, architect and surveyor, of 3 Queen Square,

Westminster. He studied at the London University and South Kensington with distinction. In 1875 he entered the office of the late Mr. Sancton Wood, District Surveyor for Chelsea, and acted as assistant until Mr. Wood's death. He was elected Associate of the Institute in 1881, and in 1882 was appointed by the old Metropolitan Board of Works District Surveyor for Southwark and North Lambeth, and held that post for thirty-three years.

His private practice as an architect was considerable, and included the design of several chapels in his own county, at Badby, Floore, West Haddon and Ashby St. Ledgers; private houses for the late Mr. Gorrings and Mr. Lough at Putney, for the late Mr. W. Brittain Jones, C.S.I., at Knockholt, for Mr. T. Wiles, M.P., at Henley; alterations and additions for the late Mr. F. M. Bridgewater at High Wycombe and Hampstead, and large hop and other warehouses in Southwark. He was a well-known member of the National Liberal Club and designed alterations and a new private dining-room at the Club. As a consultant he was in great request. He was consulting architect to, amongst others, Miss Octavia Hill, Miss Emma Cons and Miss Tait, not infrequently giving his services free for philanthropic work. He frequently acted in light and air disputes and as an arbitrator in important cases—a recent one being the Carlton Hotel fire.

Thoroughness was almost a religion to him; his specifications were models of skilful detail and his drawings were as carefully finished. A water-colour artist of no small skill, he had a delightful habit of completing the large scale section of a room by depicting in the window space the view to be seen from it. He was conscientious to a degree, and never allowed his private practice to be other than strictly subordinate to his official work. Firm and decisive in his condemnation of bad or scamped work, he was held in the highest esteem by the better class of builders, and it is not too much to say that all who have had relations with him, professionally or officially, will deeply feel his loss. As a district surveyor his administrative work was marked by a generous appreciation of what was due from himself, and he spared neither time nor trouble in order to be scrupulously fair to the interests of individuals, as well as to those of the public. Although always ready to decide practical points by the instinctive judgment of extensive practical experience, no calculation was too tedious and no investigation too intricate if it offered a solution of any difficult problem. His obvious desire at all times to meet the convenience and to spare the time of architects and builders was emphasised by a delightful and unvarying courtesy. He has left with all those who knew him the pleasant memory of an able man and a perfect and kindly gentleman.

PERCY J. WALDRAM.

Baldwin Brown [A.].

By the tragically sudden death of Mr. Baldwin Brown [Associate, elected 1911] an able member has

passed away—one who gave promise of future brilliance. For several years he had been on the staff of the Bradford City Architect, Mr. W. Williamson. On the outbreak of war he offered himself, but did not pass the doctor, while five others on the staff were accepted. Hence heavy work, with long hours, fell upon him. On being told by his doctor that an operation would be necessary, he asked that it should be postponed a day or two to enable him to complete some urgent work; he remained at his post until he had to be taken home, in agony. The operation was then performed, with apparent success; but the fatal end came, in less than two days, on the 28th November last, in his fortieth year.

He served his articles with the present writer, was afterwards in the offices of Mr. James Ledingham [F.] and of Mr. Edgar A. Parkinson. A resolution of the City Architect's Committee was passed, on the 3rd inst., expressing sympathy with his sorrowing parents and their family, and high appreciation of his "devoted services."

His nature was of the kindest, well fitted to design in Beauty, build in Truth.—RHODES CALVERT [F.].

Mr. Baldwin Brown's early death removes a man of marked personality, who had won the admiration and affection of all with whom he was brought into contact. Of a quiet and unassuming, though genial, disposition, he was keenly interested in his profession, particularly in the housing problem and town planning. His enthusiasm in regard to the former may be gathered from the fact that he occupied for a considerable time one of the tenement dwellings erected by the Corporation in one of the poorest quarters of the city, in order to study at close quarters the actual working of the scheme. This is but one instance of many in which he put himself to no little sacrifice, and considerable trouble, in order to investigate personally questions at issue.

I remember discussing with him from time to time the replanning of the Central Area, Bradford, and the various sketches he had prepared. This was some time before the recent competition was mooted, and I have come to realise, particularly after a study of the various schemes submitted in this competition, how thorough a grasp he had of the principles involved in this very difficult problem.

For some months past he had not enjoyed the best of health, but his high sense of duty kept him at his post, when perhaps it would have been better for him to have sought a brief rest and change.

There were other distinguished phases in his character and labours, I speak only of the architectural side, which has lost one of its earnest and devoted students, and those who were associated with him professionally feel the loss of a generous and warm-hearted colleague.—J. ALFRED FLETCHER [A.].

James Bernard Millard Walch [Student], 2nd Lieut. 2nd Batt. Queen's Royal West Surrey Regt., was killed in action near Cité St. Elie on 25th September 1915

[see JOURNAL, 16th October, p. 526], "after having rendered most excellent and valuable service in pushing forward in the attack with his platoon . . . killed by a bullet when holding the most forward position reached on 25th September by this battalion," a fellow-officer writes. It had just fallen to his lot to take the place of his captain. He is reported to have "behaved most bravely in leading his company to reach the second German trench with most of his men unhurt. While making observations of their position, and endeavouring to locate some snipers, which required great courage, he was shot in the head and died quite suddenly." Within the first month of the war he enlisted in the Artists' Rifles, and after passing through the officers' training school in France, and serving on the Headquarters' Guard, he obtained his commission in May last. On enlisting he had said that he felt he "ought to go," and since then he has more than once expressed himself as being glad that he had gone. On 24th September he wrote: "We are in for a 'big show' to-morrow."—W. M.

Victoria and Albert Museum.

The Victoria and Albert Museum will be closed on Christmas Day. From Sunday, 26th December 1915, to Sunday, 2nd January 1916 inclusive, the hour for closing will be 5 p.m. instead of 4 p.m. daily: the hours of opening will be as usual.

THE EXAMINATIONS.

The Final: Alternative Problems in Design.

1. The drawings, which should preferably be on uniform sheets of paper of not less than Imperial size, must be sent to the Secretary of the Board of Architectural Education, Royal Institute of British Architects, 9 Conduit Street, W., on or before the dates specified below.

2. Each set of drawings must be signed by the author, AND HIS FULL NAME AND ADDRESS, and the name of the school, if any, in which the drawings have been prepared, must be attached thereto.

3. All designs, whether done in a school or not, must be accompanied by a declaration from the Student that the design is his own work and that the drawings have been wholly executed by him. In the preparation of the design the Student may profit by advice.

4. Drawings for subjects (a) are to have the shadows projected at an angle of 45° in line, monochrome, or colour. Drawings in subjects (b) are to be finished as working drawings. *Lettering on all drawings must be of a clear, scholarly, and unaffected character.*

Subject XXV.

(a) A SMALL PUBLIC LIBRARY. The building is to be on an open "island" site, and is to cover an area of 70 feet by 40 feet, exclusive of projections. It is to be faced with stone, and should contain a Lending Library, Magazine Room, Reference Library, Committee Room, Heating Chamber, rooms for a resident caretaker, and usual offices.

Drawings.—Two plans, three elevations, one section to $\frac{1}{2}$ -inch scale. Detail of small portion to $\frac{1}{4}$ -inch scale.

(b) A MUNICIPAL GYMNASIUM. To be a detached building on an open site. The interior dimensions of gymnasium are to be 60 feet by 35 feet, and the building is to contain

in addition an entrance hall, office and pay-box, changing-room with lockers, lavatory and shower-baths adjoining.

Drawings.—Two plans, one elevation, one section to $\frac{1}{2}$ -inch scale. Detail of roof over gymnasium to $\frac{1}{4}$ -inch scale.

Subject XXVI.

(a) A ROLL OF HONOUR. A monumental tablet in a church, bearing the names of parishioners (male and female) who have served in the Forces, or as doctors and nurses in the hospitals, and have given their lives for their country in the War. The tablet to be either of stone, marble, or bronze, used separately or in combination. It is to be fixed on a blank wall inside a parish church, and the space it should cover is to be approximately 15 feet by 8 feet.

Drawings.—The tablet and details to one-eighth full size. Details of mouldings and lettering to full size.

(b) A COTTAGE HOSPITAL FOR BOTH SEXES, TO ACCOMMODATE TWENTY PATIENTS (not infectious cases). All suitable rooms to be provided upon an open site of four acres, approached from a main road.

Drawings.—A block plan showing drainage, to a small scale; plan, elevations, and section, to $\frac{1}{2}$ -inch scale.

Subject XXVII.

(a) A TOWN HOUSE IN A TERRACE. Centre to centre of party walls 25 feet. Cost not to exceed £4,000. Roadway in front is 50 feet wide.

Drawings.—Plan of each floor, cross section, back elevation to $\frac{1}{2}$ -inch scale, front elevation to $\frac{1}{4}$ -inch scale.

(b) SMALL WAREHOUSE IN THE CITY OF LONDON, for woven goods. Centre to centre of party walls 25 feet, depth 60 feet. Main building 40 feet deep above the ground storey. Workpeople's entrance to be at the back from a back street. The building is to contain a basement, ground floor, and four storeys above; office and counting-house are to be provided.

Drawings.—Plans of basement, ground, and first floors. Front elevation, and cross and longitudinal sections, to $\frac{1}{2}$ -inch scale, with constructional details to 1-inch scale.

Dates for Submission of Designs in 1916.

	Subject XXV.	Subject XXVI.	Subject XXVII
United Kingdom	27th Feb.	30th April	30th June
Johannesburg	30th April	30th June	31st Aug.
Melbourne	30th May	31st July	30th Sept.
Sydney	30th May	31st July	30th Sept.
Toronto	31st March	30th May	31st July

BUSINESS MEETING 3rd JANUARY, 1915.

The Council have decided to cancel this meeting should no notice of motion be received by the 20th inst. Should notice be received and it be necessary to hold the meeting, the fact will be announced in the professional Press.

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ARCHITECT offers two well-furnished light offices on 3rd floor in Great Marlborough Street. Rent very moderate.—Apply A. Harry Heron, A.R.I.B.A., 16 Gt. Marlborough Street, W.



MILITARY EMERGENCY HOSPITAL CONSTRUCTION.

By A. SAXON SNELL [F.].

Chadwick Public Lecture, delivered at the Royal Society of Medicine, 10th November 1915.

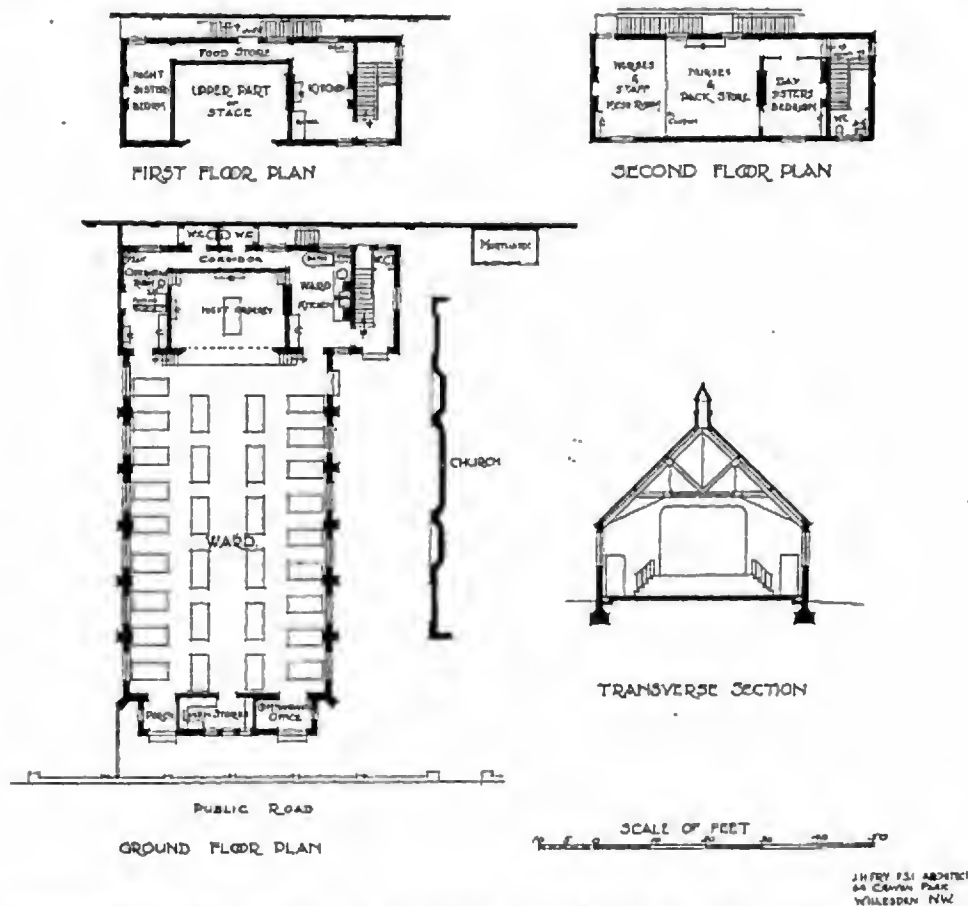
IT would perhaps have been appropriate if I had prefaced my lecture with some reference to the work of Edwin Chadwick, and its influence upon the design and construction of Hospitals. The time at my disposal is, however, all too short for dealing with the subject matter of my lecture, and I have none to spare for historical reflections. I will therefore confine myself to observing that one cannot study the question of Hospital design and construction without recalling the far-sighted genius of Chadwick, the idealism of Benjamin Ward Richardson, and—especially in connection with Military Hospitals—the practical teaching and noble work of Florence Nightingale.

In normal times we have—in addition to the purely Naval and Military establishments—a very large number of voluntary and public hospitals and infirmaries. In view of the great improvement in the general health of the country in late years, these buildings have not been, by any means, always in full use, and they might fairly be expected to deal with the casualties likely to arise at the first onset of an ordinary war; but in a first-class war it is obvious that very considerable additional accommodation would be required. This is a contingency which has always been contemplated by the War Offices of all nations—even our own. To meet such an emergency, all kinds of large buildings would be requisitioned for conversion as temporary hospitals. Indeed, in this country a number of buildings had been scheduled for this purpose long before the present war. Whether all the buildings so scheduled were the best possible for the purpose is a matter of opinion; and it is certain, at least, there were good grounds for objection to the use of schools. Of these buildings we have none to spare, unless the children are to be denied education during the progress of the war. In this—the greatest war with which the world has ever been cursed—private individuals have also come forward, and with unexampled generosity given their fine houses and resources for the benefit of the wounded. The Duchess of Bedford, in converting part of Woburn Abbey for this purpose, is but one of many.

The Germans are in these matters—as in so many others—far more thorough than we are, for I believe it is a fact that in the erection of all their school buildings eventual use as emergency hospitals has been specially provided for in the construction. We have never gone so far as that, possibly because we, unlike the Germans, have always regarded war as an occasional and disagreeable necessity. Our rule seems to have been to avoid facing the inevitable difficulties, trusting to our capacity (which really amounts to positive genius) for getting through somehow. This policy of hopefulness is doubtless abhorrent to the German mind, but it sits lightly on the shoulders of our nation. The difficulties it

imposes upon us are met with so much resource and such imperturbable good humour, that its very absurdities give occasion for really wonderful expedients.

Some weeks ago I went over a small hospital for 30 beds, which had been improvised out of a Church Meeting Hall—in fact, St. Matthew's Church Institute, Willesden. The Main Hall is used as a general ward with three rows of beds, the platform as an Orderlies' Retiring and General Utility Room, the Committee Room as an Operating Theatre, and various other small rooms as Kitchens, Store Rooms, Nurses' Quarters, etc. In every part of the building the rules of hospital planning were almost jubilantly ignored, but the goodwill and humour of the workers have left nothing undone to secure its efficiency as a hospital. The very inconveniences and shifts to which they are driven

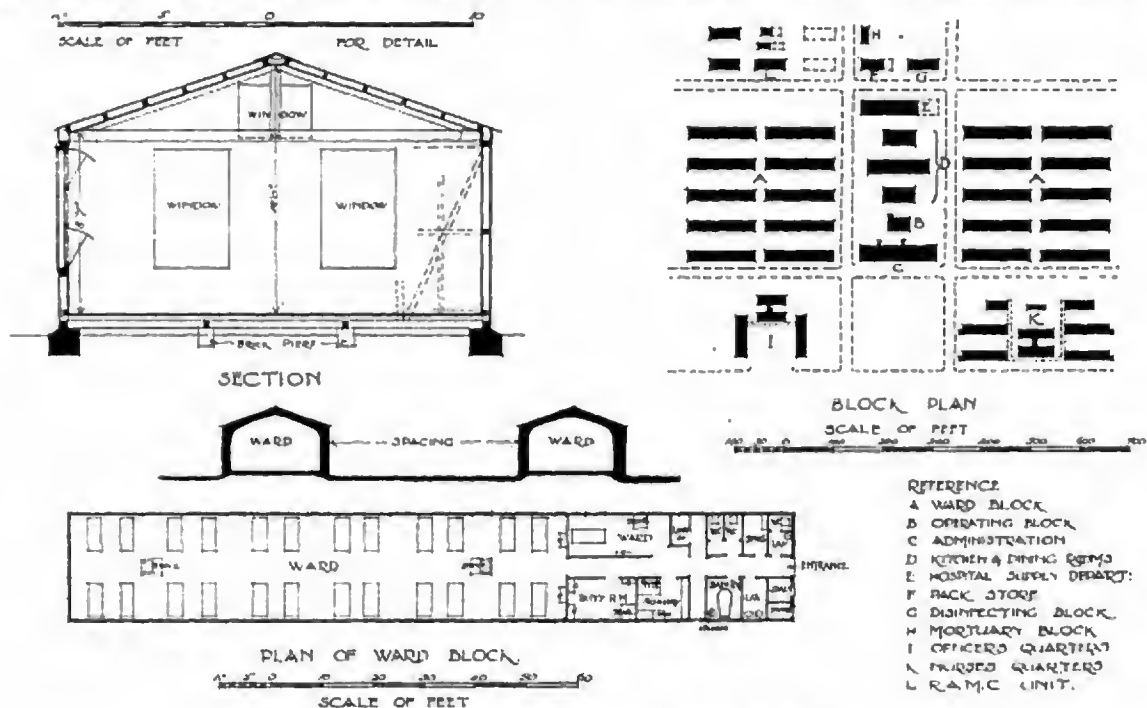


MILITARY EMERGENCY HOSPITAL, ST. MATTHEW'S HALL, WILLESDEN. (Mr. J. H. Fry, Architect.)
Church Mission Hall adapted for use as a Hospital.

seem but to provide occasion for good-humour and laughter, and certainly the patients seem well cared for and happy. I am bound to confess that I have not yet decided exactly how the surgeons would get through an operation in a room in which (it seemed to me) any movement would involve a sort of "General Post," but it appears to be managed without catastrophe.

In addition to the conversion of existing buildings, the War Office has also contemplated the erection of temporary emergency hospitals, and have long since prepared detailed plans for buildings which could be erected at short notice, very quickly, and at small expense. In the present war, however, it was quite impossible for the War Office Staff to cope with the immense task of carrying out all the hospitals required, and many architects in the country have therefore been called in to

carry out schemes, both in the erection of temporary hospitals and the conversion of other buildings for that purpose. For the arrangement and design of these buildings the plans issued by the War Office are very helpful. We find in them a guide to the size, general arrangement and relative positions of the various buildings required for a general hospital; and this information is, of course, invaluable for a commencement. An architect wishing to save himself time and trouble and expense may indeed make them the end as well as the beginning of his design; and it is conceivable that very hard-worked officers at the War Office, to whom plans of a particular building may have been submitted would welcome his lack of imagination as relieving them from the necessity to criticise at a time of stress and hurry. These architects in many cases have nevertheless not by any means confined themselves to adopting the plans prepared by the War Office, and in most cases they have introduced improvements and special features in construction to meet the requirements of the particular district in which they were built, and the ideas of the medical staff and others, under whose directions the



MILITARY EMERGENCY HOSPITAL—WAR OFFICE MODEL PLAN.
Complete Hospital, 500 beds. Cost per bed, about £70.

buildings were built or altered. It is quite certain that a study of these ideas will, in due course, materially influence the designs of future hospitals, both temporary and permanent.

I believe I am right in saying that the first of these was erected at Cambridge, as the First Eastern Military Hospital. This remarkable building represents an act of faith and courage on the part of its promoters, amongst whom I may mention Professor (now Colonel) G. Sims Woodhead and Colonel Griffiths, the Officer Commanding. They did not hesitate to act on their convictions, not counting the cost. It would be putting it too high to say that they faced possible disaster, because they themselves knew—as some few do—that their principles were right. In justice to those who in past years were pioneers in the movement, it must be said that there was a certainty of success before them. Nevertheless, custom and prejudice are very hard things to overcome, and it requires a deal of courage to ignore them.

I shall show you some views of open-air wards which have been improvised and used, winter and summer, by the Medical Officer of Nottingham for all diseases, not excluding pneumonia. And let us

bear in mind that these were not instituted in times of emergency, when we are all of us more tolerant of experiments and new ideas. I will take you back further, from 50 to 150 years, and remind you of the experience gained in other great wars.

In a Paper I read at the Royal Institute of British Architects nearly three years ago I pointed out that, much as the design and arrangement of modern hospitals have been affected by the advance of knowledge and practice, the importance of fresh air in abundance and the speedy removal of foul emanations from the neighbourhood of the sick is still fundamental. Light—and especially sunlight—is recognised as scarcely less valuable. Add to these, cleanliness in everything, from bedding to cooking utensils, and we have the main principles which form the basis of good hospital work.

Ventilation is but the means of keeping the air of enclosed spaces fresh, heating a concession (and not always a wise one) to the debilitated forces of the sick and disorganised body; convenience of administration a question of economics. A building—any building—is in itself an obstruction to light



OPEN-AIR WARD INAUGURATED BY DR. PHILLIP BOOBYER, MEDICAL OFFICER OF NOTTINGHAM.
In use for several years.

and air; but some means of shelter we must have against wind and rain and extremes of temperature. Subject to these limitations the more air and sunlight we can get into our wards the better. Neither can be obtained in the fullest degree without fairly large areas and wide spacing of ward blocks, so that air can move in large volumes around and, I may add, over and under the buildings with as little restriction as possible.

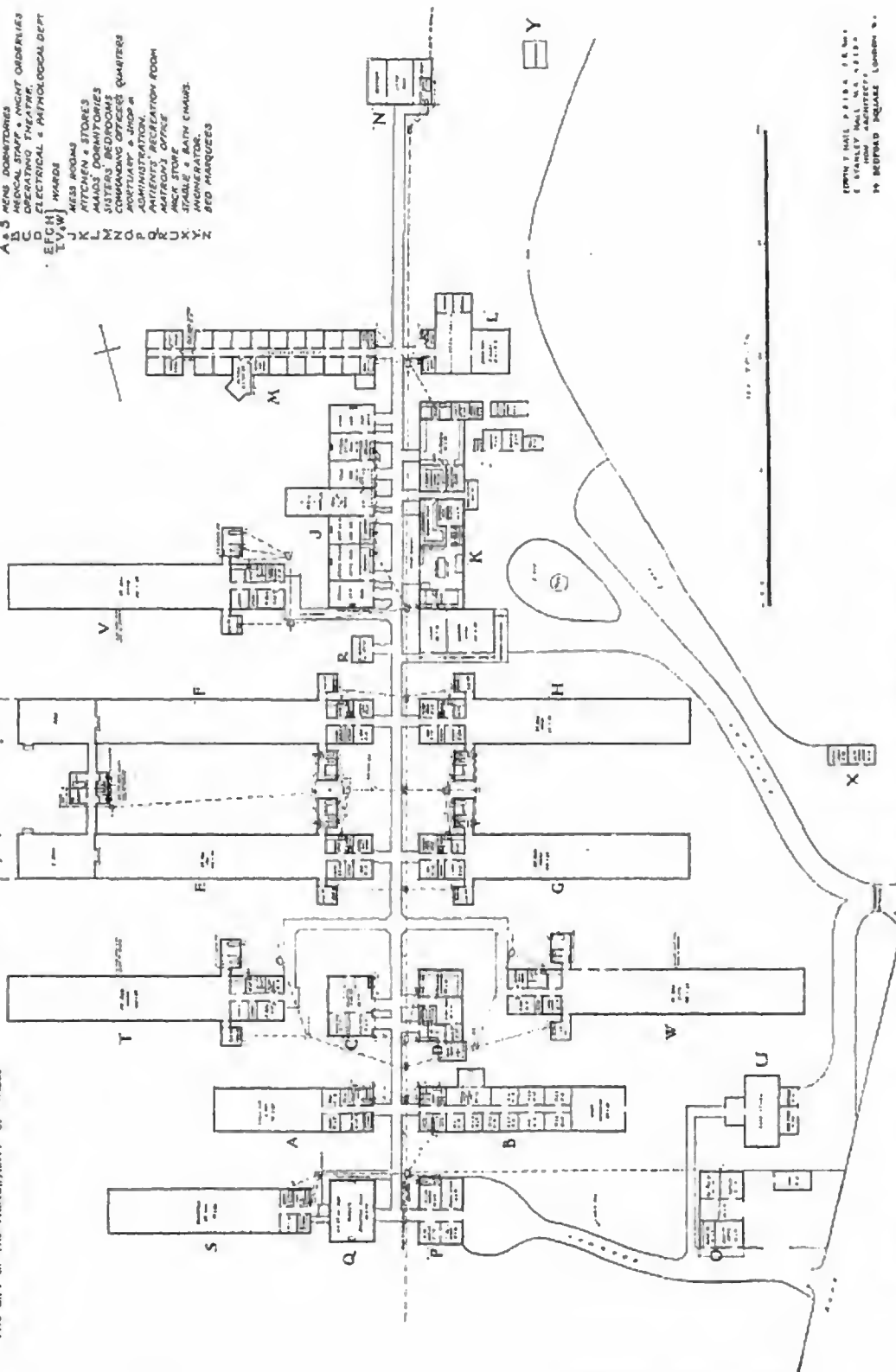
In the treatment of tubercular disease patients are trained to live in as cold a temperature as the resisting power of their bodies will permit with safety; and there are indications that this treatment will be extended—more or less modified, of course, according to circumstances—to all diseases. Even pneumonia has been successfully treated in the open air. That air—and plenty of it—is of vastly more importance than temperature appears to have been shown again and again under circumstances in which no heating at all was possible.

Miss Nightingale, quoting her experience in the Crimea, says: "In the hospital tents of the

WAR HOSPITAL, NETLEY 1914-5

THE GIFT OF THE PRINCIPALITY OF WALES

- REFERENCE.
- A, S MEN'S DORMITORIES
 - B, C MEN'S DORMITORIES
 - C, D OPERATING THEATRE
 - E, F, G ELECTRICAL & PATHOLOGICAL DEPT
 - H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
 - WARD
 - KITCHEN & STORES
 - MAIDS' DORMITORIES
 - SISTERS' BEDROOMS
 - COMMANDING OFFICER'S QUARTERS
 - ADMINISTRATIVE
 - PATIENTS' RECREATION ROOM
 - MATRON'S OFFICE
 - LOCK STORE
 - LOCKER ROOM
 - AMUSEMENT
 - BED MARQUEES

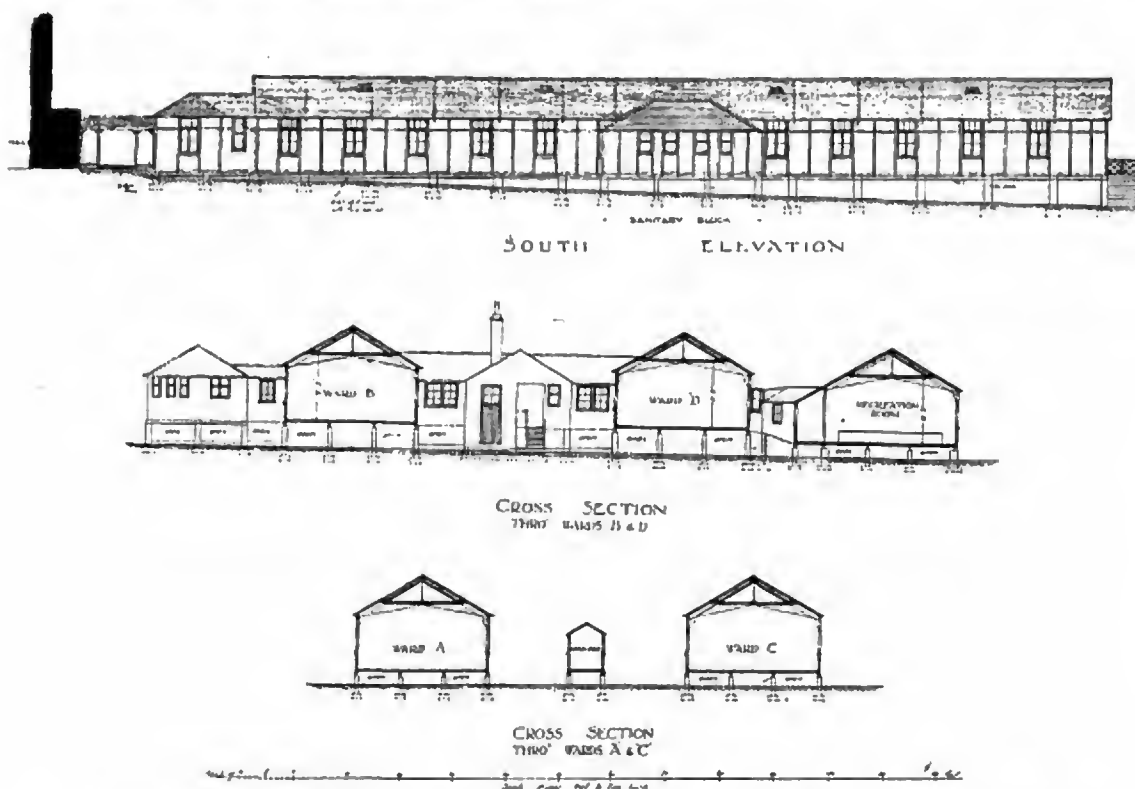


1914-5
E. STANLEY HALL, N.A. 1914
HOW ARCHITECTS
14 BEDFORD SQUARE LONDON W.C.

WELSH WAR HOSPITAL, NETLEY, erected by the Welsh National Council. (Messrs. Edwin T. Hall and E. Stanley Hall, Hon. Architects.)
Accommodation, 204 beds; cost, about £64 per bed. Complete hospital on orthodox lines. Timber frame, covered outside with galvanised iron, inside with asbestos sheets.

Crimea, although the sick were almost without shelter, without blankets, without proper food or medicines, the mortality was not above one-half what it was at the great hospital of Scutari; but these tents had only a few beds in each. Nor was it even so high as this in the small Balaclava General Hospital, which had part of its sick placed in detached wooden huts; while in the well-ventilated detached huts of the Castle Hospital, on the heights above Balaclava, exposed to the sea breeze, at a subsequent period, the mortality among the wounded did not reach three per cent."

Sir Douglas Galton, quoting Dr. Brocklesby and Sir John Pringle, says: "Hospital huts and tents in which the patients were exposed to unfavourable conditions from cold and wet produced more numerous and rapid recoveries from wounds during these wars, and from the diseases incidental to camps, than the permanent hospital buildings then in use."



THE QUEEN'S CANADIAN MILITARY HOSPITAL, SHORNCLIFFE, KENT. (Mr. W. Henry White, Architect.)

Accommodation, 102 beds; cost, £81 per bed. This does not include staff accommodation, but the buildings are more highly finished than usual. Good space under wards for circulation of air; floors laid in two thicknesses of boards and covered with linoleum. For heating, two double anthracite stoves in each ward. Erected in Beachborough Park, the country-seat of Sir Arthur and Lady Markham, who placed their house and grounds at the disposal of the authorities for the purpose.

But it was mainly in consequence of the experience of the Crimean War, the American War of Secession, and the Franco-German War of 1870-1, that physicians and surgeons generally became impressed with the importance of so arranging the buildings for sick and wounded that they should be constantly under the favourable influence of fresh air and cleanliness.

Dr. Mouat, quoting Dr. Guy, tells how in 1758, owing to insufficient accommodation in the proper buildings, "... it was resolved to erect a temporary shed with deal boards upon the open forest; to thatch it with a coat of new straw, thick enough to keep out wind and rain, and to make it large enough for 120 patients. A country workman did the work (charging for the use of the boards) for £40. Here I quote Dr. Brocklesby's words, says Dr. Guy: 'Although the hovel was finished in a fashion



9 CONDUIT STREET, LONDON, W., 8th January 1916.

CHRONICLE.

R.I.B.A. Record of Honour : Twenty-second List.

Died of Wounds.

SMITH, ERNEST KENNEDY, 2nd Lieut., East Kent Regiment. Died of wounds received a few hours previously in Flanders, on 22nd December. Aged twenty-three.

Lieut. E. K. Smith was the eldest son of Mr. and Mrs. W. Macdonald Smith, of Onslow Gardens, Muswell Hill. He was educated at Dover College and Highgate School. He attended the A.A. School of Architecture and was awarded the Book Prize in 1914.

Recommended for gallant and distinguished service in the field (Sir John French's Dispatch, 30th Nov.).

HUBBACK, A. B. [F.], Temp. Lieut.-Col., London Regiment.

FRY, P. G. [Licentiate], Major, Wessex Divisional Engineers.

MAULE, H. P. G. [F.], 2nd Lieut. (temp. Captain), Hon. Artillery Company.

Enlisted in H.M. Forces.

The following is the Twenty-second List of Members, Licentiates and Students who have joined H.M. Forces, the total to date being 53 Fellows, 395 Associates, 205 Licentiates, and 244 Students :—

FELLOWS.

Peach, C. Stanley : Captain, Reserve of Officers (T.F.), attached to Artists' Rifles' O.T.C. as Instructor.
Quiggin, Edgar : 2nd Lieut., Royal Engineers.

ASSOCIATES.

Ayre, D. W. : 2nd Lieut., Kent Fortress R.E.
Barrow, T. H. : Artists' Rifles.
Bluhm, Q. M. : Capt., 8th Manchester Regt.
Cornwell, A. Redfern : 2nd Div. Cycle Corps, R.E.
Davis, Philip W. : Lieut., Pioneer Battalion.
Eaton, C. W. : 2nd Lieut., 11th Bn. Leicestershire Regt.
Edwards, Sidney James : Singapore Volunteer Reserve Force.
Guthrie, L. Rome : 2nd Lieut., Artists' Rifles.
Gibbs, T. Harry : Artists' Rifles.
Heaven, Frank H. : 2/1st Glamorgan Field Co., R.E.
Jones, W. Sydney : 2nd Lieut., Kent Fortress R.E.
Lyon, Maurice : Flight Sub-Lieut., R.N.A.S.
McDermott, W. Kingsley : 4/4th R. W. Kent Regt.
Marshall, H. J. C. : 2nd Lieut., N. Midland Div., R.E.
Oxley, Wilfred B. : 2nd Lieut. 3/1st N. Midland Div., R.E.
Sanville, G. : Royal Fusiliers.
Shiner, Lawrence A. D. : Artists' Rifles.

Stokoe, R. : O.T.C.

Stonhouse, C. : 11th Bn. East Lancs Regiment.

Temple, Eric E. : Lieut., 3rd Field Co., Canadian Engineers.

Welford, A. : 2nd Lieut., Army Service Corps.

Wilson, H. A. : Artists' Rifles.

LICENTIATES.

Clarkson, E. S. : Inns of Court O.T.C.

Ewen, A. J. Clifford : Artists' Rifles O.T.C.

Gardner, A. McInnes : 2/3rd Lowland Brigade, R.F.A.

Hunter, J. Douglas : Artists' Rifles.

Lockton, Herbert W. : 2nd Lieut., N. Midland Div., R.E.

Lord, G. W. : Captain, R.E. (Egypt).

Phipps, Paul : Capt., 3rd Sherwood Foresters.

Tucker, A. H. : 2nd Lieut., 2/4th Bn. Royal Sussex Regt.

White, W. Dymoke : 2nd Lieut., 14th Royal Fusiliers.

STUDENTS.

Brown, Chas. R. : R.A.M.C.

Dartnall, J. A. : O.T.C., R.E. Unit.

Turner, F. W. : London Electrical Engineers, R.E. (T.F.).

Waller, T. J. : 28th Bn. Northumberland Fusiliers.

Watson, Harold : Royal Engineers.

Notes re Members on Service.

MR. W. W. TASKER [A.] has been promoted Captain 1st Northumberland R.E.

MR. LESLIE BAREFOOT [A.], formerly of the R.N.A.S. and of the Inns of Court O.T.C., has been gazetted Lieutenant R.A.M.C. (T.F.).

MR. W. DATHY QUIRKE [A.], formerly of the London Rifle Brigade, has been gazetted 2nd Lieutenant, 1st Labour Battalion, R.E.

FLIGHT SUB-LIEUT. MAURICE LYON, R.N.A.S. [A.], who was for six months at the Dardanelles on a balloon ship, was granted a commission on his return to England. He is now stationed at Roehampton, preparing to go abroad again. Among his brother officers at Roehampton is Flight Sub-Lieutenant Maxwell Ayrton [A.].

Architects and Munitions of War.

The Royal Institute has been informed by the Ministry of Munitions that there is a serious deficiency in the supply of skilled men for work in munition factories, and that this deficiency is particularly marked in respect of tool-setters. The demand for such skilled workers is altogether greater than the supply at the present time; consequently it is imperative that suitable men should be trained at once for the extremely accurate work of setting up automatic and semi-automatic tools. It is necessary to train men for this purpose to a very high degree of accuracy. In the case of the manufacture of machine-guns the limits are in the neighbourhood of one ten-thousandth part of an inch.

The experience gained from the professional men who are already assisting in this work proves that the most suitable men to be trained are of the more highly educated type. Arrangements have accordingly been made by the Ministry of Munitions for training men of this type. Such men will be given a course of training lasting two or three weeks, during which they will be paid £2 a week, and they will then be drafted straight into factories where they are most urgently required, and where they will be paid the standard rate of wages for the district for tool-setters. This rate varies from £3 10s. a week to £5 according to the district.

The Selection Committee of the Architects' War Committee have been informed of this need and have the matter before them in connection with the War Service Forms of those architects who are over military age or unfit for military service.

ERNEST NEWTON, *President R.I.B.A.*
Chairman, Architects' War Committee.

Architects' War Service Form.

Mr. Alan E. Munhy [F.], Hon. Secretary of the Selection Committee of the Architects' War Committee, writes:—

After the very helpful co-operation of the JOURNAL in the circulation of the War Service Form last month members may be interested to hear something about the response to this scheme for organising the national efforts of the profession. The forms already returned to my Committee considerably exceed a thousand, about one-half of the applicants being of military age, though, of course, by no means all fit for military service. The Committee's efforts have so far been chiefly centred in dealing with these applicants.

The various changes brought about by the operation of Lord Derby's scheme have not lightened the Committee's labours.

It is hoped that applicants for Civil work will be dealt with early in January, and it may be stated in advance that the openings as munition workers seem alone likely to offer any extensive field in this direction.

It has been ascertained that no appointments are to be expected unless candidates have been through a six-weeks' course in one of the many "Munition Schools" now provided at technical centres all over the country, and this opportunity is taken of recommending all applicants for such work to begin at once such a course so that they may have obtained the required qualification by the time it is possible to prepare selected lists for such work with a view to approaching the Munition Authorities.

Training Classes for Munitions Workers.

Mr. J. B. Beresford, Secretary to the Sub-Committee of the Government Committee on the Prevention and Relief of Distress, has addressed the following letter to the Secretary of the Architects' Benevolent Society:

DEAR SIR,—A number of Training Classes for Munitions Workers in Universities and Technical Schools has now been established in London and various parts of the country with a view to the services of educated men and women being utilised as Munitions Workers after a short course of practical training.

I enclose a list of those Training Classes which are at present in existence, and I will send you from time to time revised copies of this list. The number of these Courses will probably be largely increased in the near future, as it is understood that the Minister of Munitions is most anxious to develop the Scheme.

It may be helpful to your Society to know of the existence of these Classes in order that they may encourage such of their applicants for, or recipients of, relief as appear

to be suitable to attend a short course of instruction at one or other of these Training Classes with a view to their obtaining employment as Munitions Workers in due course.

If any class which a candidate desires to attend is already full, he should put his name down on the waiting list.

Yours faithfully,

J. B. BERESFORD.

TRAINING CLASSES FOR MUNITIONS WORKERS IN UNIVERSITIES AND TECHNICAL SCHOOLS.

London.

Battersea Polytechnic.—F. H. Newman, Esq., Battersea Polytechnic, Battersea Park Road, S.W.

Brixton School of Building.—The Education Officer, London County Council Education Offices, Victoria Embankment.

Chelsea Polytechnic.—H. B. Harper, Esq., South-Western Polytechnic Institute, Manresa Road, Chelsea, S.W.

East London College.—The Registrar, East London College, Mile End Road, E.

King's College.—W. Smith, Esq., King's College, Strand.

Northern Polytechnic.—R. S. Clay, Esq., Northern Polytechnic Institute, Holloway, N.

Poplar School of Engineering.—The Education Officer, London County Council Education Offices, Victoria Embankment, W.C.

Shoreditch Technical Institute (for men and women).—The Education Officer, London County Council Education Offices, Victoria Embankment, W.C.

Provincial.

Birmingham Technical School.—The Town Clerk, Education Office, Council House, Margaret Street, Birmingham.

Birmingham, Aston Technical School.—The Town Clerk, Education Office, Council House, Margaret Street, Birmingham.

Blackburn Technical School.—The Town Clerk, Education Offices, Library Street, Blackburn.

Bolton Technical School (for men and women).—The Town Clerk, Education Offices, Nelson Square, Bolton.

Bournemouth Technical College.—The Town Clerk, Education Offices, Municipal Buildings, Bournemouth.

Bradford Technical School.—The Town Clerk, Education Offices, Town Hall, Bradford.

Brighton Technical College.—The Town Clerk, Education Committee's Offices, 54 Old Steine, Brighton.

Bristol, Merchant Venturers' College.—Professor J. Werthimer, Merchant Venturers' Technical College, Bristol.

Colchester Technical College.—The Clerk to the Essex County Council, Education Department, County Offices, Chelmsford.

Derby Technical College.—The Town Clerk, Education Offices, Becket Street, Derby.

Grimsby Technical School.—The Town Clerk, Education Offices, Eleanor Street, Grimsby.

Leeds University.—A. E. Wheeler, Esq., Secretary, Leeds University, College Road, Leeds.

Leeds Central Technical School.—A. E. Wheeler, Esq., Secretary, Leeds University, College Road, Leeds.

Leeds, Cockburn Technical School.—A. E. Wheeler, Esq., Secretary, Leeds University, College Road, Leeds.

Liverpool University.—E. Carey, Esq., Registrar, University of Liverpool, Liverpool.

Nottingham University College.—The Registrar, University College, Nottingham.

Oldham Technical School.—The Town Clerk, Education Office, Union Street West, Oldham.

Oswestry Technical School.—The Clerk to the Shropshire County Council, County Education Office, County Buildings, Shrewsbury.

Portsmouth Technical College.—The Town Clerk, Town Hall, Portsmouth.

Salford Technical Institute (for men and women).—The Town Clerk, Education Office, Chapel Street, Salford, Manchester.

Sheffield University.—W. Swift, Esq., Technical Department (University of Sheffield), St. George's Square, Sheffield.
 Smethwick Technical School.—The Town Clerk, Education Offices, High Street, Smethwick, Staffs.

Wednesbury Technical School.—The Clerk to the Staffordshire County Council, County Education Offices, Stafford.

Wigan Mining College.—S. C. Laws, Esq., Mining and Technical College, Library Street, Wigan.

Willenhall Technical School.—The Clerk to the Staffordshire County Council, County Education Offices, Stafford.

Persons desirous of attending the London County Council classes for Munitions Workers have to sign an agreement to attend regularly, to enter for the test of proficiency towards the completion of the Course, and to engage for full-time employment in the manufacture of munitions on the completion of training. Attendance is required for four hours a day on six days a week. The fee for the Course is 2s. 6d. The Council does not guarantee to find employment for students after training.

Substitutes for Men on War Service.

The effects of the recent recruiting movements have clearly indicated the necessity of making arrangements to provide substitutes for men who have enlisted, especially for those engaged in carrying out the routine work indispensable to the conduct of large offices, business houses, banks, insurance companies, &c. Moreover, it is anticipated that the shortage of labour will be considerably accentuated by additional withdrawals in the immediate future. The London County Council, in order to be prepared for a demand for trained assistants, has made arrangements to provide suitably specialised courses of instruction at the Fulham Training College, Finlay Street, S.W., and at other centres in London. These courses are being organised at the request of those in charge of large centres of employment; and the instruction will, in the main, be given by persons already engaged in the occupations for which the students are specifically training. Morning, afternoon and evening sessions of three hours each (five days a week) will be provided so as to enable intending applicants to attend at times convenient to them. The courses will extend over a period of three weeks as a rule; and a certificate will be given to those who have attended regularly, and who show, at the conclusion of the course, the requisite standard of efficiency. It is intended that these certificates should be used for the purpose of obtaining employment. In admission to the training courses, preference will be given to women over eighteen years of age; men eligible for military service will not be admitted. It should be pointed out that the courses are designed to meet an emergency—viz., to fill temporary vacancies due to enlistment; the training must, therefore, be for particular and specified purposes. The Council's Evening Institutes will also be available for similar instruction should a sufficient demand arise. The fee for the course is 10s. 6d. The co-operation of municipal bodies, banks, insurance and

railway companies and employers of large clerical staffs is invited by the London County Council with a view to the organisation of classes to prepare prospective employees for temporary posts created by enlistment of permanent officers, and so enable them to carry on, in the most efficient manner possible, the vital operations connected with the commerce and government of London.

Professional Organisation.

A course of ten lectures on "Professional Organisation" will be given at the London School of Economics and Political Science (University of London), Clare Market, Kingsway, W.C., by Mrs. Sidney Webb, D.Litt., and Mr. F. H. Hayward, D.Litt., M.A., B.Sc., at 6 p.m., on Mondays, beginning January 17th, 1916. The course is divided into two parts as follows:

PART I.—THE SPHERE OF VOCATIONAL ORGANISATION IN THE CONTROL AND DIRECTION OF INDUSTRIES AND SERVICES. six lectures by Mrs. WEBB, beginning 17th January. Fee, 10s. 6d.—**SYLLABUS:** The part played by Vocational Organisation prior to the Nineteenth Century.—The present Organisation of the Medical Profession.—Of the Teaching Profession.—Of the Engineering Profession.—Of the Architectural Profession.—Of the Profession of Public Accountancy and Audit.—Of the manual workers in their Trade Unions.—The problems and possibilities of Vocational Organisation.

PART II.—THE PRINCIPLES AND PRACTICE OF PROFESSIONAL ORGANISATION, WITH SPECIAL APPLICATION TO THE PRESENT POSITION AND PROSPECTS OF THE TEACHING PROFESSION IN ENGLAND AND WALES, four lectures by Dr. HAYWARD, beginning 28th February. Fee, 7s. 6d.—By request of Dr. HAYWARD, teachers wishing to attend his lectures will be admitted free. Previous application for a ticket of admission must be made to the Secretary.—**SYLLABUS:** Ambiguous and anomalous position of the teaching profession.—Control by (1) Clergy, (2) Bureaucracy.—Possibilities of control from within.—The vices and virtues of professionalism.—Appointment and promotion of teachers.—Standards of efficiency.—Facts and fallacies of "experience," "scholarship," etc.

The inclusive fee for the course is 12s. 6d.

Arts connected with Building: Carpenters' Hall Lectures.

A course of ten lectures has been arranged by the Worshipful Company of Carpenters to be given in the Hall of the Company on Wednesday evenings from February to April. The syllabus is as follows:—

Feb. 2.—"Bridges, Ancient and Modern," by Mr. Harry Redfern [F].

Feb. 9.—"Sculptures of Reims Cathedral," by Mr. Arthur Gardiner, F.S.A.

Feb. 16.—"Some Movements in Modern Art," by Mr. Wm. Strang, LL.D., A.R.A.

Feb. 23.—"The English Roof," by Mr. Arthur Keen [F].

March 1.—"The Work of Alfred Stevens," by Mr. D. S. MacColl, LL.D.

March 8.—"The Effect of War on Art," by Mr. W. Robert Colton, A.R.A.

March 15.—"Seals," by Mr. H. J. L. J. Massé.

March 22.—"Landscape Painting," by Mr. H. Hughes-Stanton, A.R.A.

March 29.—"Indian Building, Ancient and Modern," by Sir Krishna G. Gupta, K.C.S.I.

April 5.—"British Forestry before and after the War," by Mr. Wm. Dawson, B.Sc.

The lectures are free by ticket to be obtained from the Clerk to the Company.

Art and War Memorials.

The Lord Mayor has consented, at the request of the Civic Arts Association [see JOURNAL, 16th October, p. 527], to preside over a meeting at the Mansion House on 28th January to insist upon the importance of some consideration or regulation of war memorials if fitting excellence of work and design is to be secured. Sir Thomas Brock, interviewed by a *Times* representative, and reminded that monuments to individuals were being erected probably in many cases by relatives entirely lacking in artistic perception, questioned how far any guidance would be of much service in such cases.

If this generation (he said) is one of little artistic perception—a view I cannot accept—surely it is better that the fact should be reflected in its nakedness than that we should make any attempt to conceal it. It is better that the generation should go down to posterity in its real colours than wearing a guise to which it is not entitled. Still, that is not the whole point. Whatever may be said of a widespread lack of artistic perception, the fact remains that among our artists and craftsmen there is very real power, both inventive and executive. There are men among our students and workers—architects, sculptors, metal workers, artists and craftsmen of all kinds—quite capable of giving a noble and artistic turn to the outburst of feeling which rightly desires to express itself in material memorials. The training of our art schools in recent years has been directed to bringing out not merely the imitative and executive, but the imaginative, the inventive capacity. So the students have responded, and it is the sober truth to say that to-day there is such a body of artistic ability available as has not been the case for some generations before, and all the monuments and memorials—unprecedented as they will be in number and importance—called for by this War could be sure of sound and competent workmanship, of worthy design, and of a noble and artistic expression. There is no need for any repetition of the monumental horrors of the late eighteenth and early nineteenth centuries. If this tradition is perpetuated it will be the fault of the public, not of the artists available. For the public the duty is that of selection. If they will be guided by those who know and understand, then the monumental record of the War will be—like those of earlier wars—a permanent enrichment of the art treasures of the country; the nobility of individual and common sacrifice will be reflected in its memorials. But if, on the other hand, individuals, ignorant of art and of its present possibilities, place their orders and give their instructions without discrimination or regard for the principles of art, then the result will be a crop of memorials which will suggest, and rightly, to later ages that this generation—whatever may have been the power of expression resident in its artists—was in the main deficient in the power of appreciation.

Sir Thomas saw the best chance of averting such a mistake in connexion with the public memorials, commemorative of bodies of men, school, college, regimental, town, city, or county monuments. These would usually be in the hands of committees to arrange, and it might be supposed that they would be composed, in part, of men and women who, if not artists, might yet insist upon the artist's advice and direction. In all such cases, he said, let the members of the committee fortify themselves by reference to the best examples of monumental art; let

them look to the best and most fitting designers and craftsmen, and they need have no fear of the result. If the country but knows enough to demand the right thing and go to the right men, the men are there. The artists of to-day are capable of making of the national desire to express in monumental records the spirit of this war and its devotion and sacrifice, such an aggregation of works of art as the generation shall have no cause to regret, and as shall not need to fear—in its honesty of purpose and its executive finish—being set alongside the memorials of the past. If anyone fails, it will be the public, and not the artists.

Professor W. R. Lethaby [F.], giving his views on the subject to a *Daily Graphic* representative, said :

This is a movement which should go forward very gently and slowly, and should attempt nothing revolutionary. There are a great many people who the moment the word "art" is mentioned regard it as something altogether dissociated from everyday life. The word has a very big A, and is, they think, entirely to do with picture-galleries, and in some degree with cold classical things which can have nothing to do with domestic life. That is a misconception which should be removed at all costs. Call it "tidiness" or "order," and you get the real appreciation of the word. London, and indeed most great towns, want tidying up and making more orderly. In doing that you beautify them, make them more artistic and more congenial to the best work, the best health, and the happiness of all. There are two cities which occur to me. Aberdeen and Edinburgh are more orderly and tidy than London.

The Architectural Association and the Royal Architectural Museum : Change of Premises.

The following statement, signed by the President of the Architectural Association, has been issued to members of the Association :—

For some years past the question of premises has been prominently before the Council, owing to the increasing activities of the Association and the growth of the School. The present accommodation is neither adequate nor suitable in normal times, and with a view to a change in the near future the Council acquired the leases of Nos. 35, 37, and 39, Great Smith Street as a preliminary step. This was done with the concurrence of the Advisory Council of the Association, with whom all important matters affecting the welfare of the Association are discussed.

The outbreak of war last year compelled the Council to postpone any further steps towards the acquisition of new premises or the enlargement of the existing building, and the matter has been in abeyance until recently, when an offer was made for the premises in Tufton Street by the National Lending Library for the Blind.

The Council, feeling that this offer was too important to be allowed to pass, consulted the Advisory Council, put the whole matter before them, and informed them fully of the policy pursued in the past and the aims of the Association for the future. The result of the conference was that the Council accepted the offer made by the National Lending Library for the Blind, and has made arrangements for the Association to occupy No. 37, Great Smith Street as temporary premises until the conclusion of the war.

The change of premises will not interfere with the activities of the Association, and the School will be carried on as heretofore.

The question then came before the Council of the best method of dealing with the contents of the Royal Architectural Museum, which occupies nearly one half of the available space in the building. It has long been a matter of regret that the housing of this very valuable collection of casts has left so much to be desired in the way of suitable space and good lighting, notwithstanding the fact that the Association has spent some hundreds of pounds on its rearrangement and classification.

In recent years the number of visitors has been so small that the cost of the upkeep, which falls on the Association, has not been justified. The Council has therefore come to the conclusion, with the concurrence of the Trustees of the Association, that the wishes of the early promoters of the Museum could best be met by offering the casts to the Royal Victoria and Albert Museum, retaining a few that are necessary for the School. The offer has been accepted, and the casts are now the property of the nation, and the authorities have promised that every facility will be given to students who desire access to them.

These changes have doubtless been made in the best interests of the Association, and after the most careful thought has been given to the matter. The most important result of the change is a very large annual saving in rent and other standing charges, which will go far to meet the heavy losses sustained by the Association owing to the War.

It is hoped that the action of the Council will meet with the approval of all members of the Association. With this end in view a Special General Meeting is to be held on 10th January, 1916, when fuller details of the matters referred to in this letter will be put before the members.

A German Report on the Damage to Architectural Monuments in Belgium.

We print from the *Journal of the American Institute of Architects* a translation of a Report which appeared in December 1914 in the *Norddeutsche Allgemeine Zeitung* upon the Destruction of Architectural Monuments in Belgium. The Report is the result of a special investigation made by Professor D. Clemen, who, it is understood, is Chairman of the Commission on Historic Monuments of the Rhine Provinces.

The general conclusion of the statement is, "that nowhere on Belgian ground have irreplaceable architectural works been lost; that not a single one of the great monuments of Flemish or Brabant art has been wrecked, and that in all the monuments which have suffered from the war, the substance of the structure has been preserved. In not a single case will insuperable difficulties prevent a complete restoration, either from a technical or historical point of view."

The Report goes on to say, in substance, "that in so far as concerns monuments damaged up to the month of November, temporary roofs had already been provided in many cases, windows boarded up, walls repaired and damaged vaults braced." The writer says that "in only a very small part of the Belgian area did these destructions occur: along the Maas [Meuse], the road from Liège to Brussels, the battlefield around Antwerp, and the line of retreat of the Allies going west. In all the rest of Belgium, so far as it is occupied by us, no important public monument has been seriously damaged up to the present. Among the Belgian towns, Louvain, Malines, Spier, and Dinant have relatively suffered most. In Louvain the conflagration which devastated the narrow stretch from the centre of the town to the station and which contained barely a sixth part of the whole town, did attack the Gothic St. Peter's Church. The fire consumed the roofs over the nave and the

transept, as well as over the side aisles. The vaults however survived, only in the apse the caps and the corbels are quite destroyed. The wooden, octagonal, slated Baroque spire, which held the earlillon, of course came down. The walls of the principal tower, however, which lost its spire in 1606, are untouched. The fire made its way to the southern cross-arm and there wrecked the Renaissance screen, as well as the Baroque altar at the east side. Under the direction of the capable architect Piscadow, of Louvain, a solid and strong temporary flat roof is being built over the whole building.

"The City Hall of Louvain, the work of Matthaus de Layens, and the richest, though not as a composition the most admirable, creation among the late Gothic City Hall buildings of Belgium, was entirely preserved through the devoted care of the Commander of the German troops, who blew up the neighbouring houses on the west side. The greatest loss of all Belgium is the destruction by fire of the University Library of Louvain, which could not be saved as soon as the fire once attacked the neighbouring houses. No provision had been made to guard the stack-room, where large windows faced the flames of the neighbouring houses. The walls of the Gothic basement which belongs to the Cloth Hall of the year 1317, with the charming Gothic interlaced architecture over the big portals of the ground floor, have remained intact, as has the Baroque upper storey, with the two gables of 1680. Lost of course, too, is the woodwork of the Baroque staircase and the Baroque interiors of the big book halls with their treasures of books and manuscripts.

"In Malines, the bombardment of Belgians, as well as of Germans, has done much damage to the two main Gothic churches, the Metropolitan Church of St. Romuald and St. Mary's Church on the other side of the Dyle. The mighty, unfinished west tower of St. Romuald, 97 metres high, shows many signs of shrapnel shots. On the south side, the church was struck by bombs, which did a certain amount of damage. . . . The windows of this church, as well as those of the near-by buildings, were broken through the enormous air-pressure resulting from the bombardment, though fortunately this damage is in the main confined to modern painted glass. The oldest of this is dated 1854.

"In St. Mary's Church there were both on the north and south side sundry evidences of shrapnel shots, as well as the effects of a bomb, though the damage in both churches is local and has resulted in no disturbance which would indicate that they have affected the solidity of the construction. The necessary provisional safety measures have already been started.

"On the Gothic Town Hall of the 14th century, the front was slightly damaged by two shots. On the near-by picturesque 'Scheepenhuis' of the year 1374, a shot has taken away one of the corner towers of the rear. Fortunately, its exact counterpart remains as an indication to help in the restoration.

"In Lierre, which suffered a great deal during the fighting around Antwerp, the Gothic church of St. Gommarius was damaged comparatively slightly. It is apparent that it was struck from both sides, and it shows evidence of a number of shrapnel shots. The tower, which was under fire because it was a signal station, shows a big hole on the upper storey on the north-west side. On the west front a bomb has unquestionably passed through the rear window. . . . In this same church it appears that the 15th and 16th century glass was damaged more by the air-pressure than by the shots themselves, but provisional measures are being taken to preserve all possible material for future restoration.

"The Jesuit church, a large Baroque construction, with its nave and transept, lost its roof by fire. The organ loft, high altar, and right-hand side altar are damaged, but the vaults held out and are being protected with temporary roofs. The City Hall, with its belfry, has been entirely preserved, as well as the Gothic houses behind the City Hall. . . .

"In Dinant the hard blue-gray freestone of the handsome St. Mary's has stood the fire successfully. Fire destroyed the roof entirely and with it the top of the high turnip-shaped main tower. The vaults everywhere are structurally sound. From the roof of the sacristy attached to the north side, the fire reached the organ through a window on the north transept

and destroyed it. Through the heat the north and west side windows were, in the main, also destroyed. Here, too, protective measures have been taken. Services have been resumed in the church.

"The rest of the damage to monuments of northern Belgium is of a less serious nature. In Dendermonde, which was bombarded not less than nine times, and coincidentally occupied alternately by Germans and Belgians, St. Mary's Church, with its tower, completed only in 1912, was considerably marred by shrapnel. The Town Hall, built on a foundation of 1336, reconstructed in 1740, and restored as a Gothic structure in the latter half of the 19th century, was completely burned out, yet the strong walls and the gables stand upright, and will permit of the reconstruction of the roof. In Aerschot . . . as in Lierre, the precious late Gothic 'Lettner' is entirely unharmed. In Alost the gigantic late St. Martin's shows many traces of shrapnel and two holes made by shells in the ambulatory; but all this damage is easily repaired.

"In addition to this, especially in the broad environs of Antwerp and on the front of the battle line of West Flanders, a series of ecclesiastical buildings has suffered more or less damage, but these are not monuments of any important value from the point of view of art history. . . .

"This is the most evident damage to the national monuments of Belgium so far recorded—in no case total nor irreparable losses. This list of losses should be compared with those buildings which have been preserved. In Louvain, the churches of St. Michael, St. Jacob, St. Gertrude; in Malines, the many ecclesiastical monuments, the whole treasure of the late Gothic and the early Renaissance work; the Cloth Hall, the former palace of Margaret of Austria, the houses on the quays, but, above all, the monuments of the capital of Brussels, are untouched, which is also true of the three large art centres of Ghent, Bruges, and Tournai, all the monuments of Liège and, above all, of Antwerp, where only the southern transept window was hit by a spent shell, . . . while the high tower, though an observation post, was carefully avoided in the shooting. Untouched in Brussels are St. Gudule and all the buildings on the Grande Place; in Ghent, St. Bavo, St. Nicolas, St. Michel, the Chateau of the Counts; in Bruges, Notre Dame and St. Sauveur, St. John's Hospital, the Market House and Town Hall; in Tournai, the Cathedral and St. Quentin; in Liège, St. Croix, St. Paul, St. Jacques, St. Martin; in Antwerp, besides the Cathedral, the Jesuit church and St. Jacob, the Town Hall in Courtrai, in Hal, in Loignies and Nivelles, in Oudenarde and Leuven, in Tirlemont and St. Trond.

"The new civil government of Belgium, in connection with the general government, looks upon it as a matter of honour to save and protect all this treasure, and it has created, even between battles, an organization to protect the movable and fixed monuments. The circle of German art-lovers who are worried about the condition of these monuments may rest assured that even in the midst of the horrors of war, and even in the short time at our disposal, such precious art possessions are safe in the hands of the German Government."

British School at Rome.

The following notice has been issued from the Office of the British School at Rome:—

By a previous notice dated 17th December, 1914, the Open Examinations for the Rome Scholarships in Architecture, Sculpture, and Decorative Painting, and for the Henry Jarvis Studentship in Architecture, due to be held in 1915, were postponed for one year. Notice is hereby given that the said Examinations are further postponed. When it is resolved to resume the holding of the said Examinations notice will be given of such resolution and of the date by which works for the said Examinations are to be submitted. Any candidate who would have been qualified in respect of age to compete in the said Examinations before their original postponement shall be deemed to be qualified in respect of age to compete in the said Examinations when the holding of the said Examinations shall be resumed.

British School at Athens: Roll of Honour.

The recently issued Report of the Managing Committee of the British School at Athens mentions that it is proposed to issue a full list of men connected with the School who are serving their country, or who have already served it to the end. One of the latest losses is Captain William Loring, a former Secretary of the School, whose death brings to a close a life of many and honourable activities characterised throughout by vitality, sincerity and good workmanship. At the School he had been Craven Student, excavator at Megalopolis, and Secretary for six years. In the educational world he had been successively Examiner in the Education Department, Director of Education in the West Riding of Yorkshire, and Warden of the Goldsmiths' College in the University of London. As a soldier he was trooper and corporal in the Imperial Yeomanry, and Lieutenant and Captain in the 2nd Scottish Horse. In South Africa he was severely wounded at Moedwill, being twice mentioned in dispatches, and receiving the D.S.M. In the present war, after serving in various parts of the Kingdom in home defence, he was wounded at Gallipoli, and died on board a hospital ship on the 24th October. Another Student who has fallen in the war is Mr. G. L. Cheesman, formerly Fellow and Lecturer of New College, Oxford, and Student of the School in 1908-9.

The Church of the Forty Saints, Onchesmos.

The Managing Committee of the British School at Athens report that Mr. F. W. Hasluck, Librarian and Assistant Director of the School, has brought to their notice as a possible subject for future students, especially architectural, of the Athens and Rome Schools, the important ruins at SS. Quaranta (Onchesmos). In particular the great ruined church of the Forty Saints deserves more attention than it has hitherto received. It is of very large dimensions (about 28 by 13 m.) and externally rectangular in plan; the walls stand to the springs of the main vaults. The internal plan is, in all probability, unique, the aisles being replaced by three hemicycles on either side. There are traces of a baptistery adjoining the church on the north side, and there is said to be a large crypt. The church bears all the characteristics of late Roman (rather than Byzantine) buildings, a fact which coincides with the date rendered probable by other considerations—the age of Justinian. Besides this church, the ruins at SS. Quaranta include a fort and a small walled town, with churches and other buildings still standing within it, all being of about the same date as the great church. The inn at SS. Quaranta is good, and communication with Corfu (two hours) frequent.

Remission of Subscriptions.

The Council have decided to remit the subscriptions and contributions due on the 1st January 1916 of all Members and Licentiates serving with the Forces who make a written application for such remission before the 1st July 1916.

The Society of Dilettanti's "Antiquities of Ionia."

The Society of Dilettanti have placed at the disposal of members of the R.I.B.A. 50 copies, at two guineas each net, of the new volume shortly to be issued of *Antiquities of Ionia*, a notice of which appeared in the JOURNAL for 4th December last. The ordinary publishing price is four guineas net. Members desiring to avail themselves of this offer should send in their applications to Mr. George A. Macmillan, Hon. Secretary of the Society of Dilettanti, St. Martin's Street, London, W.C., at the very latest by the 31st January 1916.

OBITUARY.

The late John Ely [F.].

The death occurred in Manchester on 3rd December of Mr. John Ely, aged 67 years, a Fellow of the Institute, President of the Manchester Academy of Fine Arts, and one of the oldest surviving Fellows of the Manchester Society of Architects.

Although born in the South of England—being the third son of the late George E. Ely, M.D., of Rochester—he was educated at Silcoates School, Wakefield, and from that time onward made his permanent home in the North.

At an early age he developed a keen interest in sketching and in the study of architecture, which led to his being articled, in 1865, to Messrs. Paull and Ayliffe, a firm of Manchester architects. Upon the completion of his articles, and after some further experience, he entered into partnership with the late Mr. Edward Salomons [F.], and, until the dissolution of that partnership in 1886, was associated in conducting a large and varied practice, more especially in connection with the design and erection of numerous country houses of an extensive nature in Cheshire and elsewhere—a class of work in which he continued to have the opportunity of exhibiting his skill throughout his thirty years of independent practice.

In all the details connected with domestic building Mr. Ely took the greatest interest, and more especially those necessitating archaeological research as affecting the restoration of mediæval buildings. As is well known to those who succeed him in his business, and others now in practice who passed through his office, no detail was considered too insignificant to engage his painstaking attention, and his mastery over the pencil in illustrating his intentions was to them a constant source of admiration and envy.

Opportunity is not given to every man to specialise in the work that he loves best, but Mr. Ely was fortunate in that, on the Ashby Folville Manor Estate, in Leicestershire, he was entrusted by the owner, Mr. H. H. Smith-Carington—himself an archaeologist—with work involving the restoration of and considerable extensions to the Manor House with its ancient Columbarium and Tythe barn, and with the erection, or alteration, of numerous farm buildings, lodges, cottages,

shire-horse stud farm, village hall, bridges, and other work in the village and its vicinity.

At Rothley Temple, another estate in Leicestershire, belonging to Mr. Frederick Merttens, he also found work of the same congenial nature. Of interest as being the birthplace of Lord Macaulay, the house and domestic chapel are associated with the Knights-Templars and the Knights-Hospitallers, by whom the manor was held until the suppression of religious houses. Here also the work consisted of considerable extensions, together with stabling and lodges, cottages and village hall.

Of new country-house work around Manchester and in Yorkshire he had a fair share, and he carried out several large warehouses and blocks of office buildings in Manchester, together with work for Messrs. J. Crossley and Sons, at Dean Clough Mills, Halifax, where he recently designed a new Board room and private offices.

Although in his domestic work Mr. Ely designed chiefly in the Elizabethan and Early Renaissance styles, he always retained his early love for Gothic architecture. Ecclesiastical work, therefore, had also a great charm for him, and the several church alterations which he carried out were the result of careful study of old examples. When the Church of St. Chrysostom, Manchester, with which he had been associated for many years, was destroyed by fire in 1904, and the work of restoration was placed in Mr. Ely's hands, his chief aim was to carry out the rebuilding as much as possible in accordance with the original design of his old friend, Mr. George Redmayne, who had retired from practice some years earlier and who added his request to that of the rector and parishioners that Mr. Ely should undertake the work. The restoration of the ancient Church of St. Mary the Virgin, at Ashby Folville, extending over a number of years, and only finally completed in 1913, was undertaken and carried out with his usual scrupulous regard for ancient monuments.

Apart from acting as assessor on several occasions, competitions never appealed to Mr. Ely, although he went in for several, and, as a result, carried out the St. Mary's Hospital for Women and Children, and large extensions at the Salford Royal Hospital, making a special study of this, as of every class of work that he undertook.

For a man so intimately associated with artistic and architectural societies, Mr. Ely did not appear much in public life, but a colleague, writing recently, referred to his death as a "distinct loss to local art," and very truly described him as "a man of gentle refinement and the very pink of modest courtesy, whose services in the domain which he loved so well, were none the less valuable because they were unobtrusive."

Elected a Fellow of the Institute in 1888, he also served as a Member of the Council. He joined the Manchester Society of Architects in 1878 and acted as Hon. Secretary from 1883 to 1891. After acting as Vice-President and serving on the Council for a number

of years, he was President from 1896 to 1898. As a Member of the Board of Examiners and of various committees he took a great interest in the education of Students and also in matters relating to professional practice.

He was a Student of the Manchester Academy of Fine Arts for some years, and was elected a Member in 1899, and, after holding the position of Vice-President for some time, was elected President nearly two years ago, in succession to the late Mr. Clarence Waite.

On the day of his funeral at Stoke Newington, a numerous company of his friends and colleagues attended a Memorial Service held at St. Chrysostom's Church, Manchester, of which he was one of the oldest attendants.—PHILIP BARKER [A.].

The late John Walton Taylor [F.].

Mr. John Walton Taylor [F.], of Newcastle-upon-Tyne, a member of the Council of the Northern Architectural Association, died on 3rd December last at Silloth, where he had been staying in the hopes of making a complete recovery from a serious illness. Unfortunately he had another attack which proved to be fatal. The deceased gentleman had led a busy and active life in the city of his adoption until within one year of his death, and he was held in high esteem, not only by his brother architects, but by others with whom he came in contact.

Born at Bishop Auckland on 3rd May 1854, Mr. Taylor received his early architectural training there, after which he completed his studies while engaged in offices at Newcastle and Shrewsbury. Returning to Newcastle in the year 1881, he commenced to practise on his own account, and through his ability and painstaking method—the latter one of his chief characteristics—he established a large and important connection in the district. At one time engaged in the development of large building estates, he in more recent years designed many buildings of a public and commercial character in some of the principal thoroughfares of Newcastle. Of the former class the premises of the Young Men's Christian Association were erected from his designs, on a commanding site in the centre of the city, and stand as a monument of his ability and skill. In addition to these, a large number of Wesleyan Churches and halls were erected from his designs in the North of England. In recent years his elder son, Mr. Lawrence Walton Taylor, has been associated with his father as partner.

Mr. Taylor was elected a Fellow of the Royal Institute in 1892, and a member of the Northern Architectural Association in 1891. In addition, he was a Fellow of the Surveyors' Institution. He was at all times keenly interested in the affairs of his profession, and for upwards of twenty years served on the Council of the Northern Association. Elected to the position of President during the years 1903-4, he filled that office with conspicuous ability.

A member of the Society of Friends, his earthly remains were interred at St. Andrew's Cemetery, Newcastle, on December 6th, in the presence of his

widow and family and a large gathering of mourners, which included many members of the architectural profession.—C. S. ERRINGTON [A.].

The late Thomas Markby, Solicitor to the Institute.

Mr. Thomas Markby, of the firm of Messrs. Markby, Stewart & Co., Solicitors to the Institute, died on 26th December at the age of fifty-four. His father, Mr. Henry Markby, of the same firm, and at one time President of the Incorporated Law Society, acted as the Institute's legal adviser for many years, and on his death in 1897, Mr. Thomas Markby took charge of the legal business of the Institute. Mr. Markby is the third member of the firm who has passed away within a few months. Last March Mr. R. A. Wigram, a comparatively young man, died after an illness of only four days; and in September last, Captain Bertram Stewart, a junior member of the firm, was killed in action in France. It will be remembered that the latter was arrested on a charge of espionage in Germany before the War broke out, and was for some time imprisoned in that country. At Mr. Markby's funeral, the Institute was represented by the Hon Secretary and the Secretary.

NOTICES.

Election of Members.

In accordance with the provisions of By-law 8, the names and addresses of the following Applicants for Candidature are published herewith for the information of Fellows and Associates. Notice of any objection or other communication respecting them must be sent to *The Secretary R.I.B.A.* for submission to the Council prior to Monday, the 31st January. The day of election is the Business Meeting to be held Monday, 28th February next.

AS FELLOWS (4).

FAIRWEATHER: JOHN [Associate, 1894]; 136 Wellington Street, Glasgow; and Glengarry, Stepps, near Glasgow.
GLANFIELD: ERNEST BUDGE [Associate, 1911]; 72 Oxford Street, W.; and 12 Shalimar Gardens, Acton, W.
HINDE: EDWARD PERCY [Associate, 1883]; President, Liverpool Architectural Society; 9 North John Street, Liverpool; and 15 Inglemere Road, Rock Ferry, Birkenhead.
WATKINS: HARRY GARNHAM [Associate, 1895], Vice-President, Nottingham and Derby Architectural Society; Prudential Buildings, and 14 Newstead Grove, Nottingham.

AS ASSOCIATE (1).

WARDROP: JAMES HASTIE [Special Examination, June 1915]; Middle Street, Aroot Vale, Melbourne, Australia; and 8 Mecklenburgh Street, London, W.C.

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OPEN WARD, BRISBANE HOSPITAL. (Messrs. Hall & Dodds, Architects.)

MILITARY EMERGENCY HOSPITAL CONSTRUCTION.

By A. SAXON SNELL [F.].

(Continued from p. 80.)

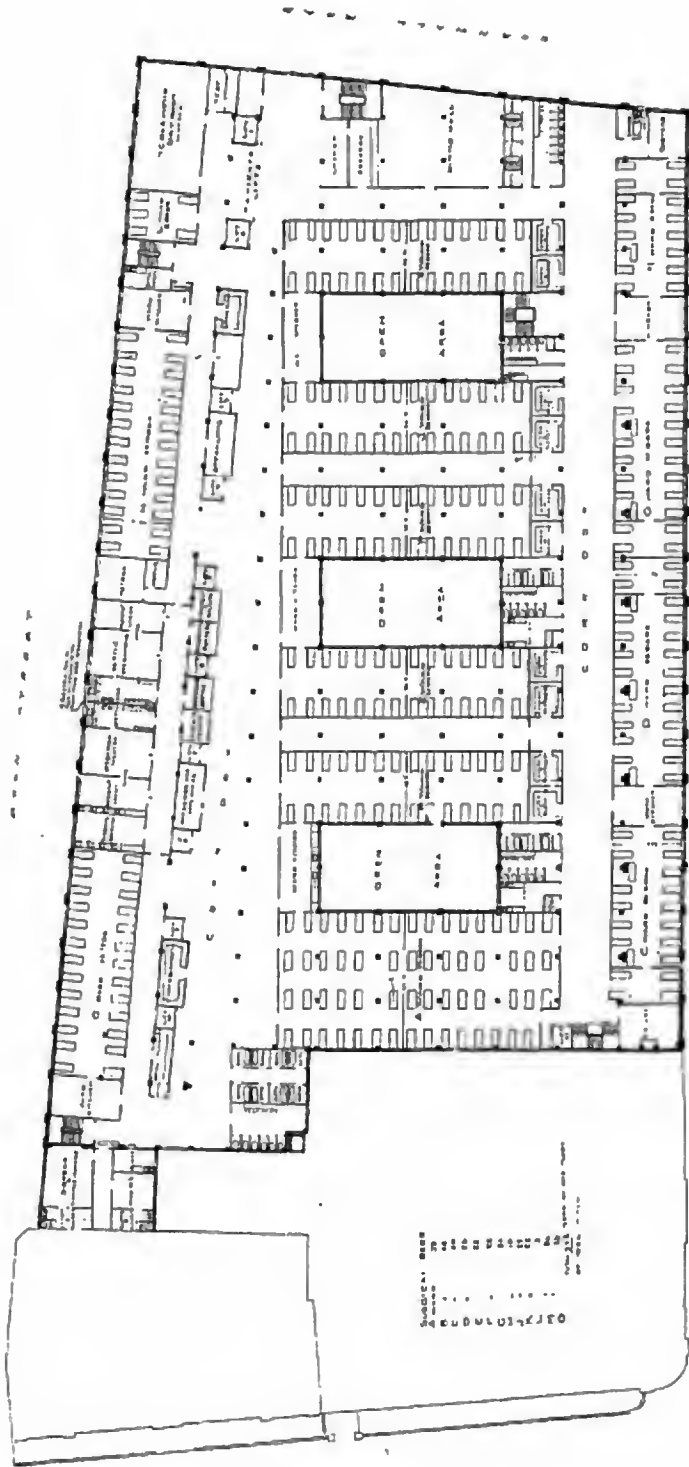
Methods of construction employed in these hospitals vary. The War Office Model Plans provide for a framing of timber, lined on the inside with boarding or plaster, and on the outside with corrugated iron. The roofs are also finished with corrugated iron. These buildings are, no doubt, quickly and easily erected, but æsthetically they leave much to be desired, and they must be noisy in heavy storms of rain.

Timber framing lined inside and out with asbestos sheets is another method of construction, and these buildings have the merit of being much more sightly, and no less fire-resisting. At Leicester the walls are of brick. The roofing is of the material called ruberoid. Tongued wood floors are general, but at Shorncliffe Mr. White has covered them with linoleum, than which there is no more satisfactory ward floor. At Leicester the floors are of cement.

Steam pipes and radiators—and not many of either—are used for closed wards. At Shorncliffe anthracite stoves are used. At the Duchess of Connaught's Hospital, Taplow, Col. Gorrell, the Commandant, told me that the radiators are heated only for a couple of hours in the evening when the patients are going to bed. These are semi-open wards.

In the open-air wards no heating whatever is provided. It would, of course, be quite ineffective. Nevertheless a few open fires are desirable, and in the later buildings at Leicester Mr. Perkins Pick, the architect, has provided at the end of each ward a partly enclosed Day Room, with an open fire, which must be much appreciated, if only for its appearance and comfort. It provides also for the nurses some means of warming their hands previous to changing dressings, &c. Electric lighting is general.

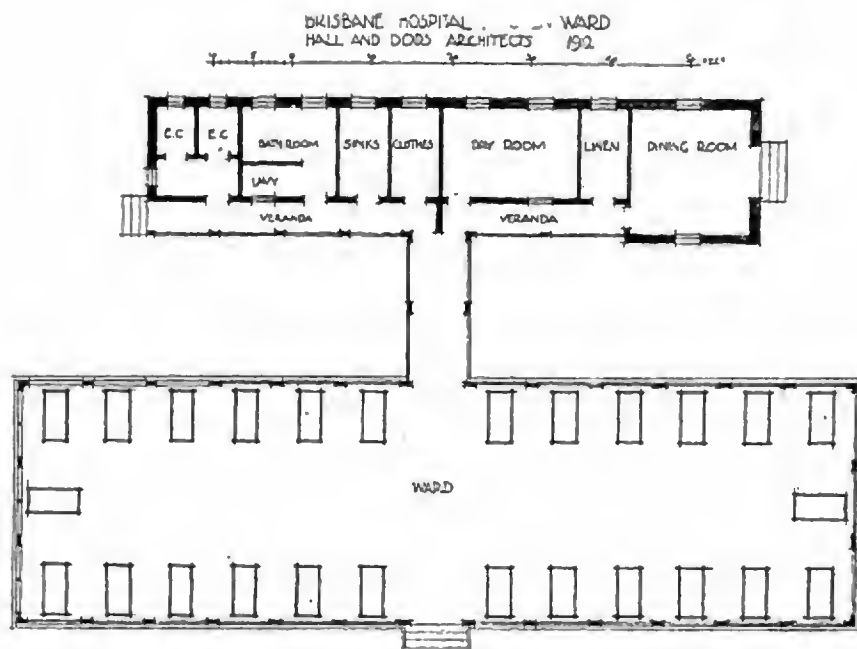
In the construction of these buildings we must not be critical as to the finishing, nor expect to find any meticulous care displayed in rounded internal angles, and in the avoidance of dust ledges. We do not expect even aseptic surfaces. We shall find that sinks and lavatories are supported on rough wood frames, and that fittings are *not* carefully fixed clear of walls. I will not say that these commonplace rules of hygienic construction have been ignored in every case; but I do say that we must not expect them, nor think lightly of the building and the architect for their omission. The buildings are meant to be temporary, are built quickly, and at very small cost, and these matters are incompatible with refinement in detail.



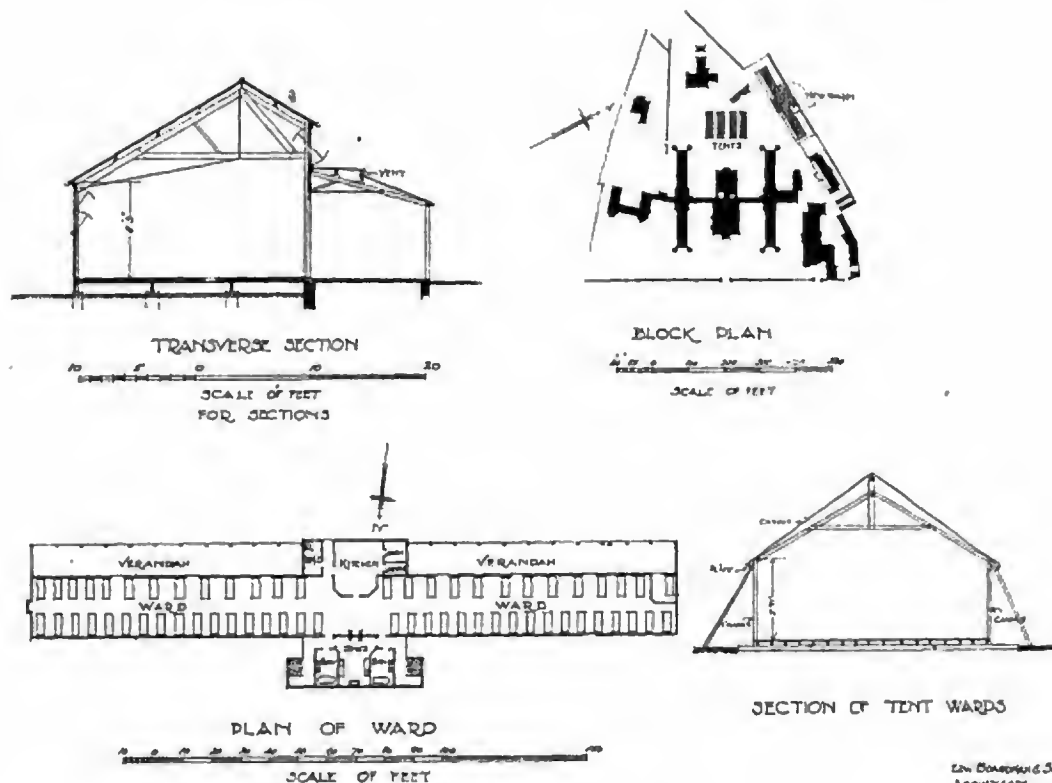
SECOND FLOOR PLAN

KING GEORGE HOSPITAL (H.M. STATIONERY HOSPITAL), Stamford Street. Messrs. Edwin T. Hall and E. Stanley Hall, Hon. Architects; designs carried out by Mr. H. B. Measures, Director of Barrack Construction.

Accommodation, 1,700. Theoretically a most unsuitable building, as most of the wards are lighted only from small enclosed areas. The whole building is, however, well finished and fitted. Wards are divided off by light concrete partitions. Everything done to secure whatever ventilation is possible. Proximity to Waterloo Station of great value.



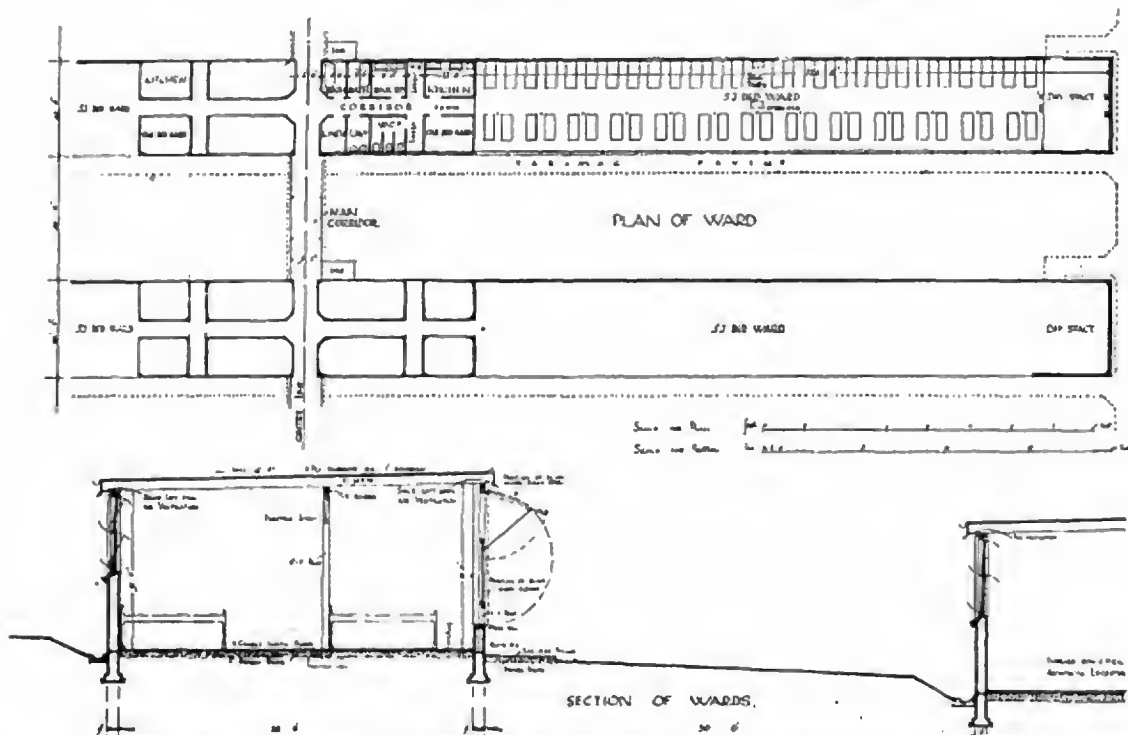
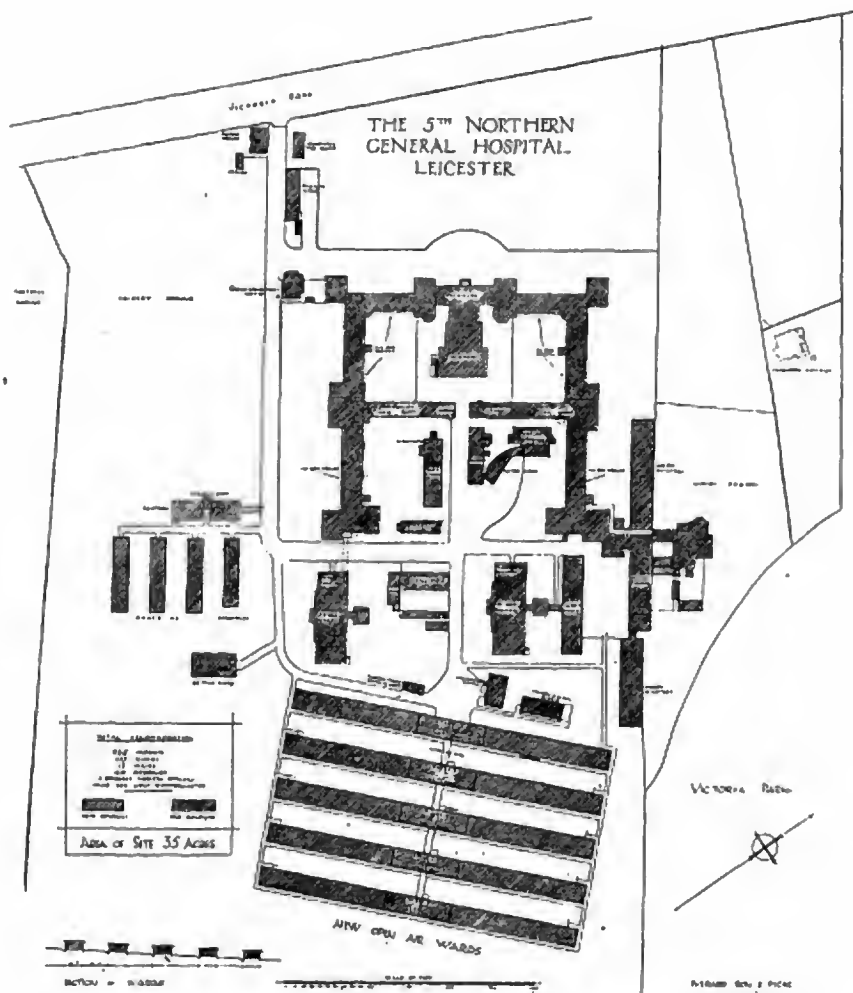
OPEN-AIR HOSPITAL, BRISBANE. (Messrs. Hall and Dodds, architects).



E. BOARDMAN & SONS
ARCHITECTS
NORWICH

NORFOLK AND NORWICH HOSPITAL: TEMPORARY HUTS. (Messrs. E. Boardman & Sons, Norwich.)

Accommodation, 60 beds. Cost of ward blocks only, £15 per bed. General construction: timber framed, lined inside and out with asbestos sheets; boarded floor, roof covered with pantiles. Open fireplaces in wards. Windows for light and ventilation over the verandah.

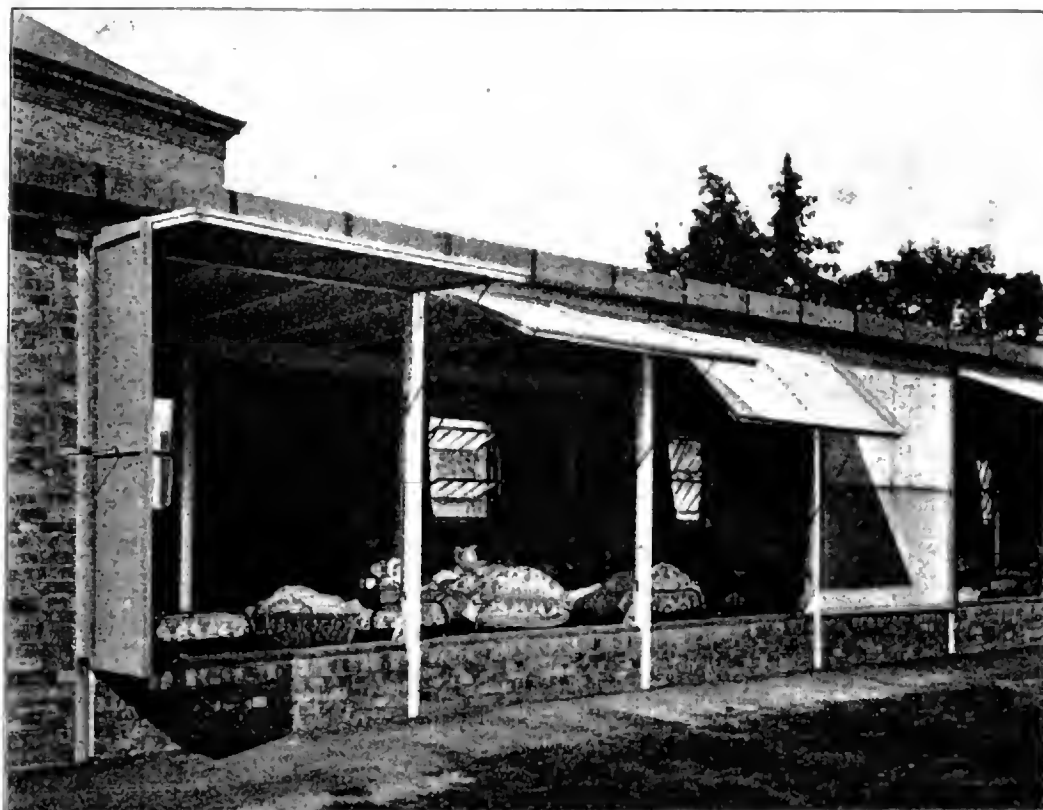


FIFTH NORTHERN GENERAL HOSPITAL, LEICESTER. (Messrs. Everard, Son, & Pick, architects.)

Cost, ward blocks alone, £15 10s. per bed. Accommodation, 530 beds. General construction: brick walls, cement floors, flat roofs covered with ruberoid. Awnings of plain wood frames covered with canvas. Built in two months. Open-air Wards facing south. Based on Cambridge plan.

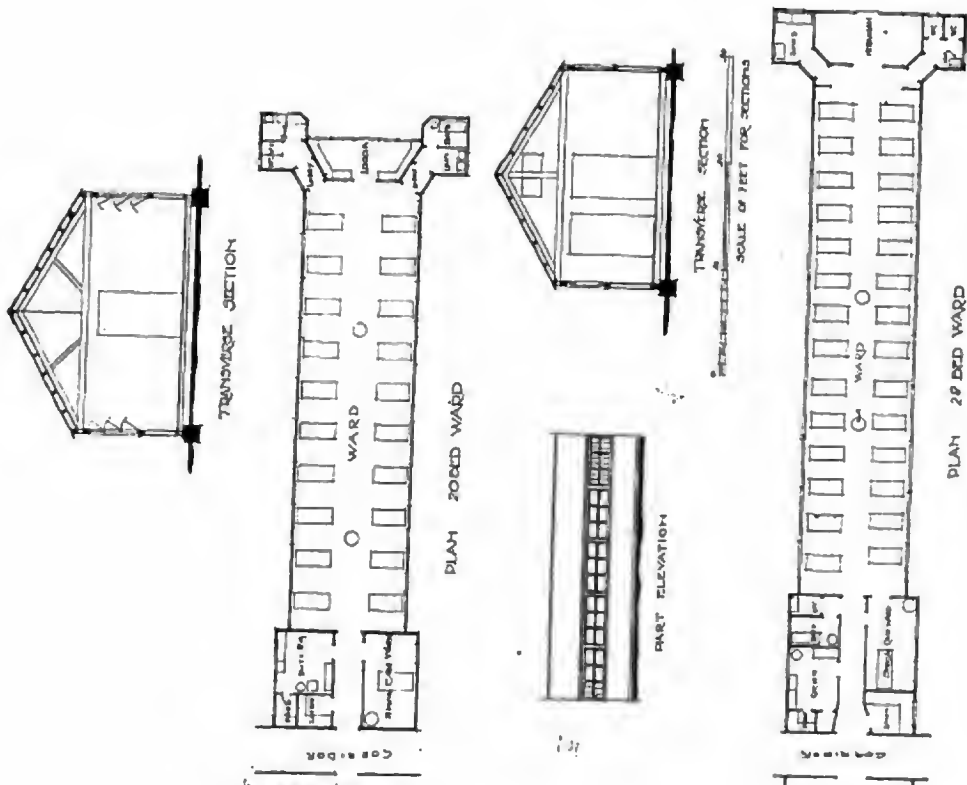
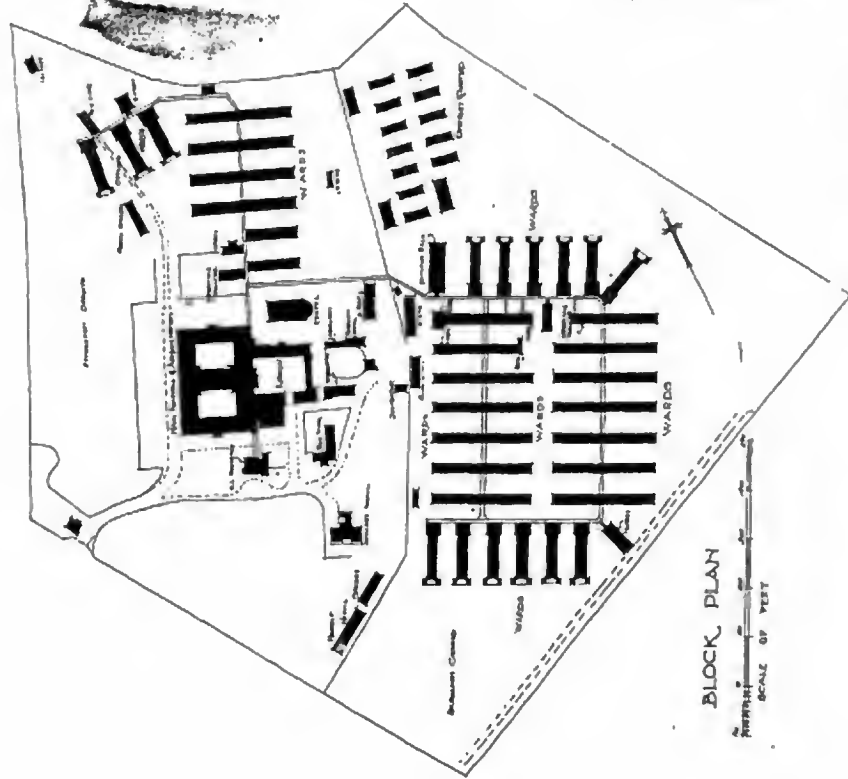


Internal View of Open-air Wards.



Detail of Blinds, showing adaptability to various requirements.

FIFTH NORTHERN HOSPITAL, LEICESTER. (Messrs. Everard, Son, & Pick, Architects.)



2 Bed Ward Area
12 Bed Ward Area
Covers 1000

THIRD GENERAL HOSPITAL, WANDSWORTH. (Mr. Pain Clark, architect.)

Cost per bed, about £48, exclusive of alterations to old building. Small site. Ward blocks vary in plan, being built at different dates. 1,500 beds. General construction: timber framed, galvanised iron outside on boarding, internal faces $\frac{1}{2}$ -inch plaster slabs finished in Keen cement; grooved wood floors.

After all, the more nearly we attain to open-air conditions the less important are these refinements. Whatever harm may result from the dust and dirt accumulated in angles and corners and upon rough surfaces is largely neutralised by the aseptic qualities of sunshine and pure fresh air in abundance. I do not suggest that these refinements, as I have called them, can be safely ignored in *all* cases; I think that for fever cases, for instance, and in the Operating Theatre we cannot afford to do so, the risk is too great.

There is one matter, the provision of a concrete bed under the ground floor, which we can scarcely call a refinement, and I am bound to criticise adversely its omission in many of the temporary buildings. It may be of less importance if the building is raised a few feet above the ground, so as to provide a clear sweep for the air; otherwise, especially in closed wards, ground air is bound to find its way upwards, and the quality of ground air is variable and not to be ignored with impunity.

The cost of these buildings varies to a surprising extent. But we should be careful in drawing hasty conclusions in the matter. It is very difficult to generalise, because so many factors affect the cost of buildings. When the cost of these Emergency Hospitals varies from £20 to £70 per bed—and £500 per bed is a recognised round figure for *permanent* hospitals—it is obviously difficult to explain the variation in a few words. Of course, there can be no possible comparison between the cost of temporary and permanent hospitals, any more than, say, between this fine room and a tin mission hall, although they may be equally effective in all that is materially essential. The variation in cost as between one temporary hospital and another depends upon quite a number of matters, *e.g.*, whether staff quarters, operating rooms, &c., are included—the situation and site—the relative cost of ordinary buildings in different neighbourhoods, &c. Some, too, are more highly finished.

Let me conclude by reminding you that the most important factors in the cure of disease and injury are high medical and surgical skill and good nursing. A hospital may be regarded in the first place as the workshop of doctors and nurses, and the better it is adapted for the purpose the more effective the service. The teaching of Chadwick and his disciples has, however, shown physicians and surgeons that Nature is their greatest ally, helping them silently, slowly and surely, and preventing the dissipation of their energies in battling against preventable obstacles to recovery.

I should like to express my thanks to the War Office for the information and facilities they have given me, and to the many architects who have, at the expense of no small time and trouble, provided me with the material for this lecture.

OTHER HOSPITALS CITED AS ILLUSTRATIONS.

FIRST EASTERN HOSPITAL, CAMBRIDGE.

Architect, Mr. Chas. Skipper. Accommodation, 1,500 beds. Cost per bed, £20, exclusive of accommodation for nurses and medical staff. All wards face south. No open fires in any part of the ward buildings. Double connecting corridors which provide for disconnection as sanitary offices from ward blocks. General construction: unwrought timber posts and framing covered outside only with asbestos boards; roofs covered with ruberoid; floors of tongued boarding.

THIRD EASTERN MILITARY HOSPITAL, HUDDERSFIELD.

Architect, Mr. Kenneth F. Campbell, Borough Engineer, with the assistance of Prof. Sims Woodhead. Accommodation, 500 patients. Cost per bed, £45 complete. Erected in two months. General construction: wood framing, asbestos sheets and ruberoid roofs; canvas blinds. Based upon the Cambridge plan.

WOBURN ABBEY HOSPITAL.

Hospital improvised at Woburn Abbey by the Duchess of Bedford on the open-air principle, using verandas, riding school, and aviary.

DUCHESS OF CONNAUGHT'S RED CROSS HOSPITAL, TAPLOW.

Architect, Mr. Chas. Skipper. Cost per bed, £48, exclusive of staff and nursing accommodation. Pavilions in butterfly form, all facing south; whole south fronts; windows generally kept open. Experiments have been made to substitute for windows very fine wire gauze. Construction is similar to Cambridge, but lined inside and out with asbestos. Wards provided with a small number of steam radiators, heated only for a couple of hours while patients are going to bed.

SCOTTISH NATIONAL RED CROSS, GLASGOW.

Architect, Mr. Chas. Skipper. Cost per bed, £54, including staff and nursing quarters. 1,500 patients.

ADDENDUM.

It is inevitable that when we return to normal times of peace the experience gained in this War will materially affect the design, construction and cost of permanent hospitals; and it is equally inevitable that many mistakes will be made in trying to do in peace things which were satisfactory in war. It will be suggested that if excellent sick wards were made with timber or other light structures for war service, why should we waste money in costly permanent buildings? It will be pointed out that if a hospital, such as that at Cambridge, can be built for £20 a bed, it must be reckoned extravagance to continue building others at £500 a bed.

These questions will scarcely be raised by those who are intimately acquainted with the subject, and with such it is unnecessary to argue. It will be quite as reasonable to ask men who have been roughing it in "dug-outs," roofless farmhouses, temporary huts, etc., during the War, why they should want to return to the comforts and housing conditions of ordinary life. Doctors, nurses and patients will cheerfully suffer the inconveniences and rigours of war as part of the game; but not so in normal times, even though it may be clearly demonstrated to them that the hard conditions of war time were conducive to quick recovery and fitness for work. Dr. Boobyer, of Nottingham, has indeed trained his nurses to work his open-air hospitals, year in and year out, but it requires men of forceful personality, such as his, to achieve this result.

Nevertheless, if alone because after the War we shall have to exercise economy in every direction, we must reconsider the whole question and make up our minds as to what is and what is not essential in the design and construction of permanent hospitals.

In the first place, Building Laws will have to be considerably modified before we can build in any other way except according to present by-laws; secondly, we shall have to reconsider every orthodox fitting and the finishing of surfaces and to reject those which cannot be shown to be absolutely necessary. Costly tile or marble linings to bath-rooms, sanitary conveniences, and even operating theatres, may be discarded without material or, indeed, any risk. Painted and enamelled Keen's cement surfaces are, if anything, better for all purposes, and they cost far less. Teak joinery may well give place to soft wood, painted and enamelled. Indeed, several varieties of solid doors are made with soft wood interiors and birch wood surfaces, which can be painted and finished with a fine surface, and, of course, they are much cheaper than solid teak doors.

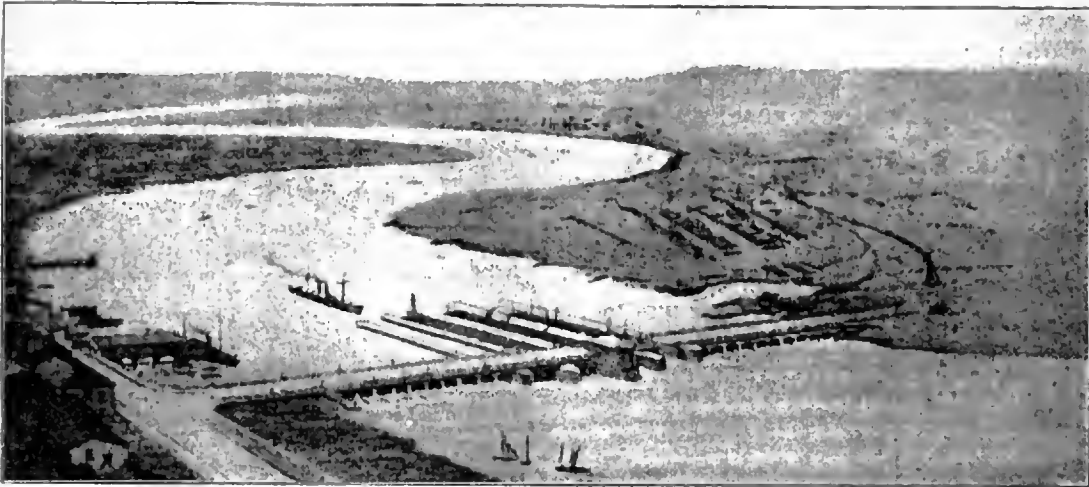
Not much saving can be effected safely in metal fittings and plumbing, because experience shows that it is economical in the long run to use those of the best and strongest.

When we have once realised that a comparatively high temperature is unnecessary and really harmful for patients we may dispense with a great deal of heating apparatus. Indeed, in open-air hospitals, it can be reduced to a negligible amount. When we can devise a method of admitting fresh air more freely (without draughts) into the wards it will be possible to reduce the present standard of cubic space.

A. SAXON SNELL.



THE THAMES BARRAGE.



PROPOSED THAMES BARRAGE AT GRAVESEND.

IT is ten years or so since the project for a great harrage across the Thames at Gravesend was first mooted. With the formation of the Port of London Authority the suggestion, however, fell into the background, in view of the many pressing matters in connection with the Port which needed urgent attention. The idea has, however, recently been revived by a letter written to the Institute by Lord Desborough, Chairman of the Thames Conservancy, and the matter is now having the consideration of the R.I.B.A. Town Planning Committee, of which Sir Aston Webb is Chairman.

It is evident that there are many points of interest to the architect in such a proposal, although the execution of the project itself is one involving various engineering and commercial problems. The proposal for the construction of such a barrage has so far never been considered by the responsible authorities, and in view of the large expenditure contemplated or already in hand by the Port Authority in the deepening of the river and the construction of new docks, it is desirable that the suggestion should at least be carefully investigated.

Shortly after the Barrage Scheme was originally promoted, a book entitled *The Port of London and the Thames Barrage* was published by Messrs. Swan Sonnenschein, and the following précis of the information it contains has been abstracted by the Hon. Secretary of the R.I.B.A. Town Planning Committee:—

The book comprises studies and investigations by Mr. T. W. Barber, M.Inst.C.E., Engineer to the Thames Barrage Committee; Mr. E. T. Hennell, M.Inst.C.E.; Mr. C. J. Dibdin, F.I.C., F.C.S.; Mr. Clayton Beadle, F.C.S.; and Mr. D. Urquhart. These are naturally all in agreement as to the practicability of the scheme, the cost of which is estimated at 5½ millions sterling.

The Thames Barrage Committee was formed in 1903, with

Sir Thomas Brooke-Hitching as Chairman, to promote a public enquiry into the proposed barrage across the Thames in the neighbourhood of Gravesend, thus converting the whole of the lower river from Tilbury to Teddington into a fresh-water lake. Although three Bills were promoted, the agitation was unsuccessful, but the opportunity provided by the proposed creation of the Port of London Authority suggested the desirability of producing the book.

The introductory chapter deals with the growth of the volume of trade in tonnage of vessels, etc., and gives some extracts from the Report of the Royal Commission on the Port of London.

The tonnage of vessels entering the Port increased from 6 millions in 1860 to 15½ millions in 1899. The value of goods imported increased from 124 million pounds sterling in 1872 to 164 millions in 1899. Exports in 1899 were 88 millions, and re-exports of foreign goods were 34½ millions. In 1840 the number of vessels registered in the Port was 2,955 with a tonnage of 619,920, and in 1901 they numbered 3,027 with a tonnage of 1,850,809.

The Royal Commission states that "the abolition of the Scheldt dues in 1863 brought Antwerp into rivalry with London, and Hamburg, Rotterdam, Havre, etc., followed suit. This competition is still in its infancy and Continental ports are spending lavishly on improvements. It seems inevitable that the business of London as a port of distribution will decline."

The Royal Commissions which have reported on the Port are: the Select Committee on the Pilotage Bill, 1870; the Thames Traffic Committee of the Board of Trade, 1878-9; the Select Committee on Pilotage, 1888; the Lower Thames Navigation Commission, 1895-6; and the Royal Commission on the Port of London, 1902, at which every interest was fully represented, except the barrage proposal.

Evidence offered in 1902 in favour of the barrage proposal was refused by the Commission on the ground that it was outside the scope of their reference, which was based upon the scheme of dealing with the river as a tidal one.

The suggestion is made that the opposition of the then dock companies to the proposal was due to a fear that the

barrage, by making the river itself into a vast dock, would injure their monopoly and possibly prevent their being bought out. With the creation of a public authority to control the Port of London this objection disappears.

There can be no two opinions, after reading the Report of the Royal Commission on the Port of London, as to the need for a drastic and effective change of methods. The present disabilities of the Port are given as: (a) Insufficient depth of water for increasing size and tonnage of ships; (b) Tide waiting at Gravesend and at dock entrances; (c) Excessive dues; (d) Overlapping of authorities; (e) Excessive cost of barging, pilotage, and labour; (f) Loss of time at the Port; (g) Dangerous navigation due to tides, narrow channel bends, fogs, and crowded state of river.

The remedies proposed by the Royal Commission, and now by the Port Authority, are dredging and keeping dredged the river channel; the construction of new docks and certain administrative changes; deep-water dock extensions near Tilbury.

Alternative schemes include: formation of a deep-water basin below Gravesend; deep-water wharves above Greenhithe; jetties along the river front extending into the deep channel; dockisation of the upper part of the river (above London Bridge); and construction of cuts across bends of the river. None of these have met with much approval as they are all partial remedies, besides being very costly or impracticable.

Proposals to improve the navigation of the river by dams, with locks and weirs, were made as far back as 1857, but none of these proposals contemplated a dam below Woolwich or Blackwall. In 1859 a paper by Mr. W. R. Browne, M.Inst.C.E. (Vol. 66, Inst.C.E.) and an earlier paper by Mr. H. Robinson (Vol. 15, Inst.C.E.) advocated a dam and locks at London Bridge. There are already 32 locks on the Thames between London and Oxford.

During 1904-5 a number of resolutions in favour of enquiring into the merits of the barrage scheme were passed by public meetings at Bermondsey, Grays, and Northfleet, and by the Borough Councils of Woolwich, Southwark, Hackney, and Wandsworth, the Thames Conservancy, City Corporation, &c. Letters in support were written on the engineering side by Sir Douglas Fox, and on the sanitary side by Mr. W. J. Dibdin.

In the past the authorities governing the Thames have been the Thames Conservancy Board (dating from 1857), the Watermen's and Lightermen's Company (dating from the sixteenth century), the Trinity House (Buoys, Beacons, and Pilotage), the City Corporation (Port Sanitary Authority), the Dock Companies, the Board of Trade, the Admiralty, London County Council, and the Metropolitan Police. The powers of these authorities with respect to the Port are now largely transferred to the Port of London Authority.

The engineering questions involved in the barrage scheme are very important, and may be summarised as:

1. *Geological Conditions*, which must dictate best position for barrage.

2. *Topographical Conditions*.—Possibility of drainage of land below high-water level, at present drained through sluices at low water.

3. *Practical Conditions*.—(a) Permeability of banks and works necessitated to obviate back flooding of sewers and surface-water drainage; (b) Constructional difficulties.

The Lower Thames lies mostly on the London clay and below Purfleet on chalk, mostly covered with thin beds of gravels, sand, and alluvial clays. The possibility of

keeping the channel clear by dredging depends largely on the natural angle at which the material of the river bed will stand under water. A chalk bottom is a very stable one, but for other and softer materials the following angles may be assumed as approximately correct:

Dry sand and earth, 21° to 37°	} Under water these become 3° to 10° Shingle and gravel, 7° to 15°
Damp clay, 45°	
Wet clay, 14° to 17°	
Shingle and gravel, 35° to 48°	

If these latter figures are correct, the difficulties of keeping a deep-water channel open are considerable.

THAMES DATA.

Total watershed area, 6,034 square miles.

Total length, 201½ miles.

Number of tributaries, 20.

Total length of tributaries, 464 miles.

Fall from Lechlade to London, 258 feet (or 21 inches per mile).

Average rainfall, 24 inches per annum (equal to 8,030,597,142 tons over the watershed).

Evaporation is 57 per cent., i.e., 15 inches per annum.

Annual outflow 1,176,440,625 tons

+ 344,636,200 tons (abstracted by Water Board).

Total 1,520,076,825 (equivalent to 8.61 inches of rainfall).

Average current, 2 miles per hour; ebb tide, 2½ to 3½ miles per hour.

TIDES.

London Bridge to Gravesend, 28 miles. Average range of tide, 15 feet.

London Bridge to Teddington, 20 miles. Average range of tide, 10 feet.

Extreme range of tide at Gravesend, 24 feet 6 inches.

Extreme range of tide at London Bridge, 17 feet 3 inches to 20 feet 8 inches.

LEVELS.

Trinity high water is 12 feet 6 inches above Ordnance datum.

The tide attains a height of 2 feet higher at London Bridge than at Sheerness. The salt water, being heavier than fresh water, is chiefly at the bottom and pushes up underneath the fresh water. There is known to be a large influx of spring water at various places in the bed of the river.

Depth at low water varies from:

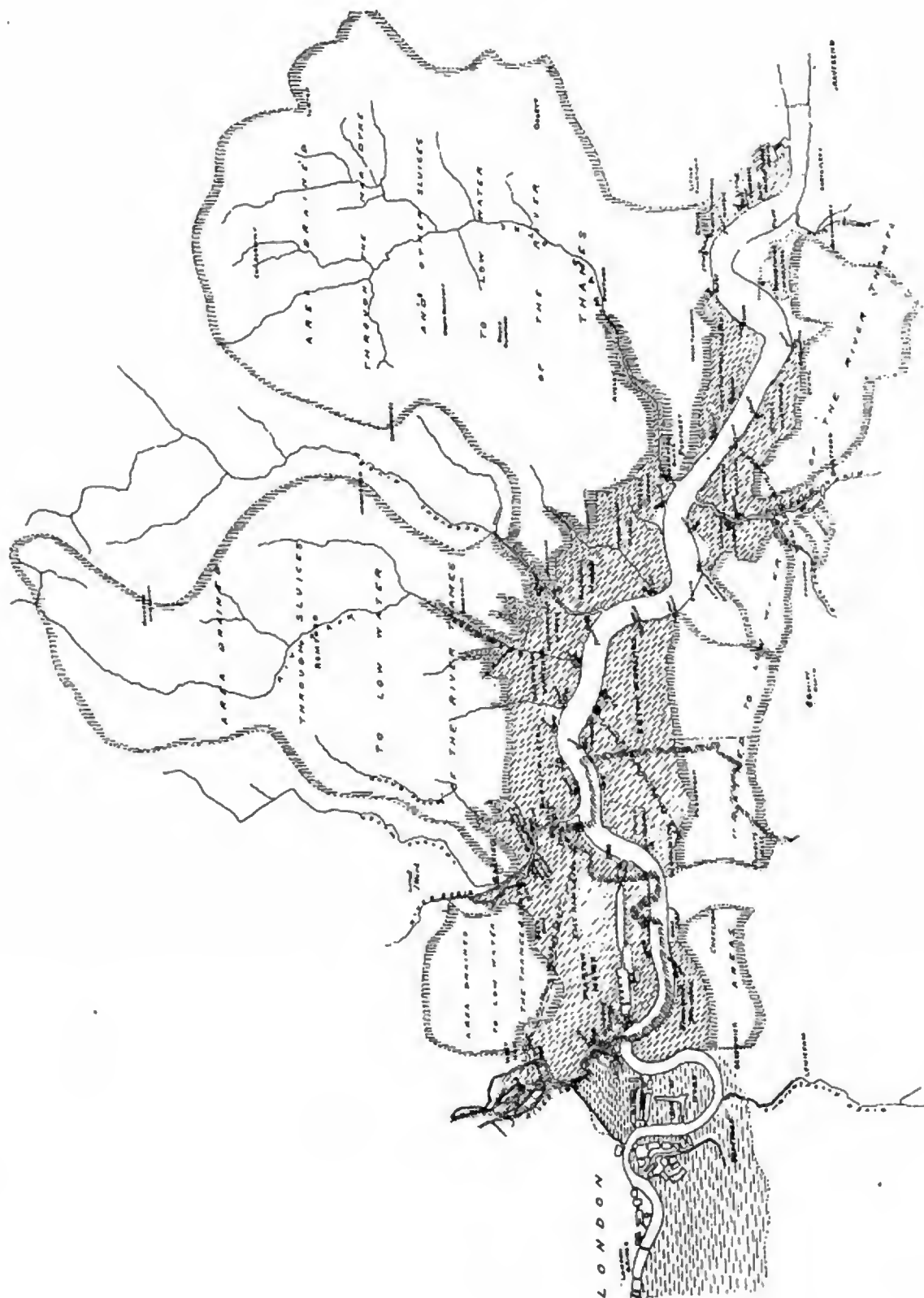
6 feet at Teddington,
to 9 feet at London Bridge,
20 feet at Barking,
21 feet at Erith,
and 50 feet at Gravesend.

The volume of tidal water entering the estuary each tide is about 3,000,000,000 tons. The average daily flow of the river itself is 3,250,000 tons, which is only $\frac{1}{100}$ part of the total tidal water in the estuary. In this way the significant fact is arrived at that 96.6 per cent. of the estuary water is purely oscillatory, and it becomes matter for consideration to what extent the river water (3.4 per cent. of the whole) affects the channels of the estuary under these conditions. It is undoubtedly, however, the cleansing factor in the tidal river.

SILT.

The average suspended matter in the upland water is one grain per gallon, or an annual total of 20,000 tons of mud and silt brought down to the tidal river.

From the sewage effluents an annual total of about 40,000 tons of depositable matter (7 grains per gallon) is discharged into the tidal area.



Scale

miles

From the storm overflows, of which there are fifty, and other sources, a further 10,000 tons is discharged, making a total pollution of 70,000 tons per annum.

This would probably make three times this quantity of wet mud.

In fact, however, the quantity of mud dredged is 700,000 tons per annum, of which it appears, from the above figures, at least two-thirds is washed up by the scour of the tides from the banks of the lower river. The docks at present form convenient mud-traps, and the author argues that if both docks and tide were abolished by the proposed barrage the small amount of mud in the river water proper would remain in suspension and be gradually carried out to sea.

PROPOSED BARRAGE.

The barrage is proposed at Gravesend, just below Tilbury Docks, in order to allow these docks to be used at all states of tide. The river at this point is not too wide. The foundation would be chalk, which will bear enormous pressures safely. The barrage would be approachable at all times of tide. Rail and road communication would be obtained across the river. Six locks of different dimensions are proposed, to allow a minimum depth of water at low tide of 35 feet, and a length of 1,000 feet, with a series of sluices on each side.

The power plant for working the lock gates and capstans would be considerable, and it is evident that a breakdown of machinery, or attack by enemy, might seriously affect the use of the river. An alternative by-pass canal is suggested to obviate this danger, but the danger of enemy attack would remain. The mode of construction to avoid obstruction during the progress of the works is carefully gone into. It is estimated that three years would be required for the construction of the barrage, but this seems an under-estimate, as only two or three piers could be in course of construction at one time.

The narrowing of the waterway will admittedly have the effect of increasing the velocity of the current at Gravesend to $3\frac{1}{2}$ miles per hour and near low water to $4\frac{1}{2}$ miles per hour, and efficient organisation of the river traffic will be necessary. It is pointed out, however, that on completion of the barrage the river will be tideless above the dam, and practically still water for some miles below, thus reducing the great risk at present inseparable from navigating in the strong river tides.

A railway and possibly a road tunnel under the barrage forms part of the scheme.

The proposed water level is at Trinity high water as fixed by Act of Parliament in 1805 (12 feet 6 inches above Ordnance datum). Several of the principal docks at present have pumping plant to raise artificially the water levels to various heights, varying from a few inches to as much as 3 feet 6 inches at the London Docks above Trinity high water. With the construction of the barrage, the pumping will be unnecessary, except perhaps in the case of the London Docks. The present dry docks are, however, dependent on tidal action, and pumping provision would have to be installed for these.

The drainage outfalls are mostly below high water and very near low-water level, and it is obvious that any alteration in the permanent level of the river will necessitate arrangements for pumping the effluents into the river above Trinity high water. As an alternative, an intercepting sewer might be constructed along each bank of the river to take the effluents to a point below the dam.

The drainage of low-lying lands is a very important item, and will have to be dealt with by pumping or a system of

intercepting sewers. Also the raising of the saturation level in land at present low-lying may be injurious to its use for building purposes.

PRECEDENTS.

Proposals have been made from time to time by engineers to dam important tidal rivers, but none have hitherto been given effect to until recently on the Charles River at Boston, where the conditions form a close parallel to those to be met with in the Thames.

In 1755 Sineaton proposed the dockisation of the River Clyde. This was not, however, adopted, and the Clyde Trustees have since expended £7,430,000 in dredging and improving the river to a low-water depth of 20 feet.

In 1877 Thos. Howard proposed the dockisation of the Avon at Avonmouth. His proposal was not adopted, because the extraordinary range of tide, some 40 feet, would have left the entrance unapproachable at low water.

The Charles River dam at Boston, however, appears to be the outstanding example of a similar dam actually carried out and completed within the last few years. Boston people have long agitated for a dam to hold up the tidal river to about high-water level, chiefly, however, from considerations of beauty and health rather than navigation, which, as the shipping port of Boston is mostly below the dam, does not constitute a matter of great importance. A special Committee was appointed in 1901 to go into the matter, and their conclusions are reported at length. It appears, however, that the absence of docks and shipping above the dam in the case of Boston constitutes an essential difference with the conditions ruling in the Port of London.

DREDGING AS A MODE OF DEEPENING THE CHANNEL.—

The practicability of dredging a deep-water channel up to London itself depends upon the angles of repose of the softer materials forming the river bed, and some of the evidence given by expert engineers before the Royal Commission on the Port of London shows that not only is there a difficulty in keeping such a channel dredged, but there may also be risk to the adjoining banks. This difficulty would, of course, disappear with the construction of the barrage.

THE POSSIBILITY OF A SLATING UP BELOW THE DAM has been investigated, but it does not appear that any difficulty need be apprehended on this score.

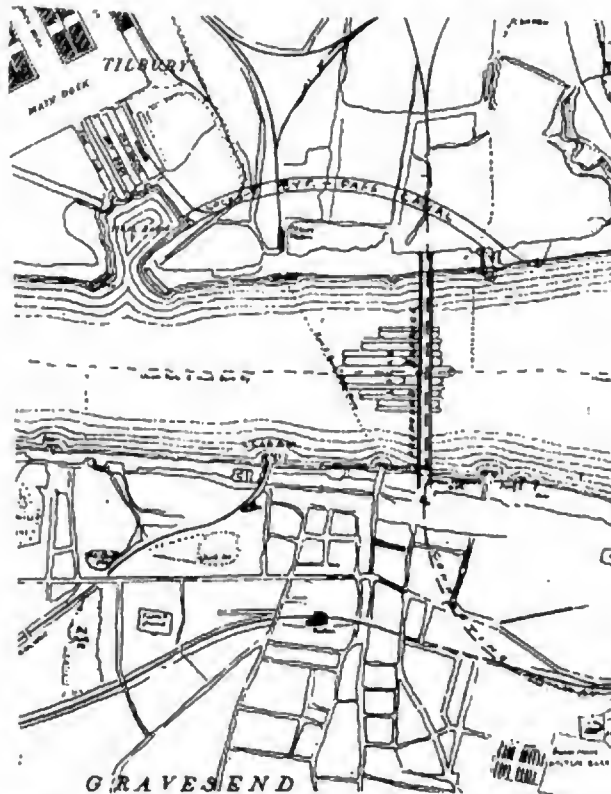
THE INFILTRATION OR PERCOLATION OF RIVER WATER FROM THE THAMES if the river were permanently held up to high-water mark would naturally be considerably more than at present, and the probable effect of this on low-lying land adjoining the river has been investigated by Mr. Clayton Beadle, Secretary to the Underground Water Preservation Association. He assumes that the river walls are perfectly water-tight, but that they are not built to any depth into the marsh, and therefore any permeable strata in the marshland is not shut off from the river by the wall. The natural water level in the marsh land is stated to approximate to the "mean tidal level" of the river. With the construction of the barrage it follows that the water on all such lands would have to be pumped up to the new level, say from 10 feet to 15 feet, in order to keep down the saturation level of the land to the present height. The extent of the marsh lands below high-water mark is very considerable, and is given as 130 square miles (see Map, p. 99), to drain which by pumping would necessitate some sixty-seven pumping stations, at an estimated cost of £474,000, and the improvement of river walls at a cost of a further £791,300.

THE SANITARY CONDITIONS of the river are dealt with by Mr. W. J. Dibdin, F.I.C., F.C.S., who is of opinion that the purifying power of fresh water is greater than salt water, and that a comparatively still body of fresh water, with animal and plant growths, will dispose of very considerable amounts of sewage. Mr. Dibdin's remarks, however, appear to be somewhat guarded, and it is possible that the sewage outfalls on both sides of the river would have to be removed to points below the barrage.

THE GROWTH OF THE TRADE OF THE PORT is well known, and it is mentioned by the Port of London Commission that there are 8,000 barges varying from 20 to 100 tons. The time saved in entering and leaving docks for unloading and other purposes will then be seen to be considerable.

the public for some time past, and has been very generally approved subject to its being proved to be practicable. As to this, two of the greatest living expert authorities have reported that it is practicable, and that it offers very important advantages over any other proposal yet suggested for solving the entire problem of the Thames, its port, traffic, cleansing, finances, and its beautification.

It is with this last that our present purpose is concerned, not because it is the most important, but because the commercial and technical aspects of the subject have been much discussed, while very little has been said about its lighter side; yet, to the "man in the street," the resident, the visitor, and, indeed, to everyone who considers it apart from a purely business point of view, the look of the river, its appearance from every direction, the opportunities it will afford for pleasure purposes, boating, sailing, fishing, racing, riverside trips, and garden



Thames Barrage: Plan of Connecting Railways North and South.
(J. W. Barber, M.Inst.C.E.)

THE THAMES AS A HIGHWAY AND PLEASURE RESORT.

With the absence of tide, much could be done to encourage the growth of riverside pleasure resorts, and the improvement and embanking of the river would come as a natural consequence.

Extracts are appended from an article in *The Field* which puts this question of the possibilities of a pleasure traffic from the popular point of view:—

The regeneration of the Thames, its cleansing, and the beautification of its banks will only be effected by the construction of the proposed barrage at Gravesend, with the resulting removal of tidal action and the maintenance of its waters permanently at high-water level. This proposal has been before

places of entertainment and recreation, will, after all—though not of paramount money value—be the clear and standing evidence that will appeal to him strongly as proof of the improvement of the river as a result of the barrage.

There are many still living who can recall the old riverside resorts, which were in their prime fifty years ago—Cremorne, Rosherville, Vauxhall, and their memories are matters of history, but history often repeats itself it is said—with improvements, of course—and it may not, in fact need not, be long before Thames-side blossoms out once more into gardens and waterside retreats, and carries on its cleansed and polished surface whole armadas of pleasure craft of every description. At the present moment all this class of traffic is rigidly confined to the upper river, because there is no tide there and no mud, but clean water, pleasant river banks, waterside hostels, tea-gardens, boating clubs, hotels and accessories that would be

impossible with a tidal river. The Port business is practically confined to the stretch of the river below London Bridge, above which it would be of great public advantage if the embankments were extended on both sides to form public promenades and avenues for street traffic, which, thus diverted, would relieve the main thoroughfares.

The Embankments, beautifully laid out as they are, and well kept, would be much enhanced in value as promenades if the river was always at high water, and clean. Now one has to take the off-chance of its being high or low water as the main factor on which the pleasure of a walk on the Embankment depends. If it is low water, the river is dirty, with broad margins of foul mud; at high water the prospect is much finer, but still the nose is often offended, because the water fronting the visitor is not from up the river but from down below, from the area fouled by the effluence of the great city, accumulated for months past, and washed up and down continuously, day and night, past the upturned noses of its citizens.

Let us see, then, in what way and where it is possible to improve the river front when the tides have been banished. In the first place the river will have become a fresh-water lake, always remaining at one level, never, even in flood seasons, rising more than a few inches above this level, and having a slow, almost imperceptible, downward current at all times. In such a river-lake it is evident that boating would be possible and pleasurable at all points where the business traffic is not too great to restrict it or make it dangerous.

First in importance must be placed the steamboat service. This has been always, and will be now—until the river is dammed and the tides kept out—run under very unfavourable conditions, such, in fact, as have made it both unprofitable and unpopular; because, with the tides running, the boats must be of sufficient power to go at fair speed against tide. The piers are difficult of access and approach, rise and fall with the tides, and provide very little depth of water at low tide for the steamers; in fact, above London Bridge they often go aground, and are necessarily confined in navigation to the middle of the river.

The steamers also stir up the mud, and thus create around them smells that do not add to pleasure or enjoyment. The piers are most unattractive, unsightly erections, suggestive of docks and barges instead of joy. . . . The entire service and its surroundings is squalid, drab, and depressing to a degree, so that it is not difficult to see why it has failed, and may yet fail, to attract the public. And yet, what a boon it would be to the poor workers if they had the run of their own river under pleasurable circumstances, and at a cost that they could afford.

Now let us turn to the other picture, with the Thames a high-water lake, and see how it will help the steamboat service. In the first place the steamboats need not be nearly as high powered, or, what is better, will be able to run with the same power safely at much higher speed than now, because there will be no tide to contend with. With a cleaner river the boats can be kept cleaner and brighter; there will be no mud stirred up and no smells to assail the nostrils. The entire width of the river will always be available for their navigation, and the piers can be removed close to the river side, where, being fixed, they will be much more accessible than now. The navigation also will be very much safer and easier than is now the case with the tides running. There will, therefore, result a great increase in the number of passengers, because the full, clean river will attract vast numbers to have a run on it who will not look at it in its present condition, and those who know how to cater for the public will soon provide for the newly-acquired taste for water trips.

But where can the people go? Up river, above Westminster Bridge, besides the well-known places of resort, such as Kew, Richmond, Battersea, Teddington, and others, there

are many miles of river banks capable of being developed into riverside gardens, parades, walks, tea houses, etc. The demand will create the supply. Down river, below the crowded shipping district, there are Greenwich, with its hospital and park, Woolwich (north and south), with their riverside gardens and their public parks. Purfleet has splendid natural beauties that can easily be developed into an attractive pleasure resort. There are already old-fashioned chalk pit gardens and cliffs, tea gardens, and other attractions of a primitive kind, struggling for customers, that would go in thousands if an adequate steamboat service on the Thames lake was started. Farther down, Gravesend and Tilbury possess great natural attractions, if the approach to them by river is made easy and pleasant. Rosherville is still unsurpassed for its natural beauty, but cries out for visitors. And below the barrage will be the sea, the ever-moving shipping, the pilot boats, the departures and arrivals of ships, a moving panorama of intense interest that can be watched from the barrage parade and will be a source of unending attraction. The passage of the shipping through the locks, the sea on one side and the lake on the other, will afford plenty of amusement and perhaps sometimes of excitement. All these river attractions will fall naturally into line and increase as soon as the river itself has been made what it ought to be, a clean, fresh-water lake.

But, besides the steamboat service, it is certain that we shall see a rapid development of the boating and aquatic sports now confined to the upper river. The row boat, the launch, and in places the houseboat will be very much in evidence, and in the lower reaches sailing and yachting can be indulged in with every element of success. Regattas will again come into vogue, and under more favourable conditions than obtain at any seaside place, because carried out in a well-protected lake of ample area, where the sport can be seen from both banks.

If we cannot nowadays revive the memories and scenes of old Thames, we can at least improve on them and bring them up to date. It is evident from the foregoing that the pleasure traffic will add a large volume of employment for boatmen and riverside people, who now complain of the decay of the Port, and of want of employment. It will also enhance the value of all riverside properties, bring into use river frontages, marshes, and vast tracts bordering the river, now derelict and useless.

A reliable and regular boat service will also enable city people to live at places on the river side, many of which cannot be reached by rail. The cheapness of the boat service will make these places attractive to working people, and Professor Flinders Petrie's proposal to remove the workpeople and factories down river to the border lands of Kent and Essex may yet be realised, where they will enjoy better and healthier conditions of living than in the crowded East-end of London.

Hamburg, one of London's greatest rival ports, has long enjoyed the advantage of such a locked water area or artificial river-lake in its beautiful Alster Basin, where the pleasurable aquatics we have described have long been part of the popular recreations of the townspeople, and there is no reason why London, with its dense, hard-working population, should not enjoy equal or even greater advantages by the conversion of its river into another Alster Basin.

ESTIMATED COST.

Construction of the Barrage	...	...	£2,841,600
Land and Compensations	...	...	960,000
			£3,821,600
Pumping Station for low-lying land	...	...	474,400
Strengthening River Walls	...	...	791,300
Total	...	...	£5,067,300

REVIEWS.

GOTHIC ARCHITECTURE.

Guide to Gothic Architecture. By T. Francis Bumpus. 359p., 143 illustrations; 8s. Lond. 1915. T. Werner Laurie.

Some time back we were able to notice a primer of *English Mediaeval Architecture* by Mr. Cyril E. Power.* It was written for students, and gave a comprehensive and detailed, if somewhat technical account of the chief factors of a mediaeval building, such as its vaulting and abutment system and roof construction. Mr. Bumpus's volume, on the other hand, deals with these and such subjects in brief and desultory fashion, and apparently has the general public in view, and not the student. Again, Mr. Power's book on every page bears witness to the fact that it was written in the year of our Lord 1912. The newer book, on the other hand, but for the imprint on the title page, might well have been written some fifty years ago. Take, for example, the primary factor of any and every building, that of planning. We are told that "Westminster Abbey is the only introduction into England of the perfect French arrangement of chapels at the extremity of a church, as a chevet." But, to say nothing of twenty-one Anglo-Norman churches known to have been so planned, there were periapsidal chevets at Croxden Abbey, Lincoln Minster, Beaulieu Abbey, Hayles Abbey, and Tewkesbury Abbey, all of them Gothic; and the last of them is still above ground. Again, we hear that "the whole of the foundations of the Cistercian abbeys were laid out . . . with square east ends." But Croxden Abbey, set out c. 1190, has been shown by Mr. Lynam to have had a chevet of the Westminster type, as also Hayles Abbey, as remodelled c. 1270; while Mr. Brakspear has shown that Beaulieu Abbey, founded in 1204, had a circumambient aisle and encircling chapels after the manner of Clairvaux. Nor can it be correct that, "with the exception of Cluny and St. Quentin, the eastern or choir transept seems never to have been adopted in France." The present writer has seen eastern transepts at St. Benoît-sur-Loire and Souvigny, and there are others at Besançon and Verdun. Again, it is a hazardous remark that "it may almost be said that there are no square-ended churches except in Great Britain and Ireland." Of France, at any rate, this is far from being true; M. Enlart tells us that "rectangular chevets are frequent in the Romanesque churches of Picardy, Ile de France, Normandy, Champagne, and Burgundy," and "in Gothic churches of small or moderate size in the Nord, Normandy, Burgundy, Champagne, and the south-west," and gives long lists of them.† Nor is Mr. Bumpus more fortunate in his remarks on the planning of the Chapter House. "Except Lincoln," he says, "the Chapter House of Westminster is the earliest of the whole series of polygonal Chapter Houses, having

been begun about 1250." But at Margam, Dore, and Alnwick polygonal Chapter Houses were put up before the end of the twelfth century or but little later. Nor can one agree that "the churches built by the Crusaders in Palestine are almost exactly like the churches in the west of France at the same period." These Palestine churches are plainly derivatives from those of Provence, which was not in the west of France when I was there. As to vaulting, a treatment which omits all mention of the Norman vaults of Durham Cathedral and conjectures that St. Bartholomew's, Smithfield, may be "the earliest instance . . . of the vaulting of a central space" is original, but incorrect.

A chapter devoted to Pre-Norman Architecture is equally out of touch with modern research. Mr. Bumpus harks back to long-exploded heresies, and finds Roman churches at Reculver, Dover, South Elmham, and Castle Rising. Old Canterbury Cathedral, as set out by Professor Willis, with apse at the west as well as the east end, he believes to be seventh-century work. The most ancient of the churches of Ireland, we are told, had a nave and chancel separated by an arch. Mr. Champneys and Miss Stokes have proved that they had neither doorway arch nor window arch nor chancel arch, nor, indeed, any arch at all. "The plan adopted by the Anglo-Saxons was invariably the basilican." If this refers to the Anglo-Saxon churches in general, it can hardly be correct, for very few of the Anglo-Saxon churches surviving have aisles; Wing and Lydd may be exceptions.

It is not always easy to accept the author's chronology. Half a century ago it was good enough for the archaeologists that "Edward I. built the five bays of the nave immediately westward of the transept of Westminster Abbey." As a matter of fact, the Westminster monks were in the black books of all three Edwards; for it was with the connivance of the abbot and monks that the whole of the king's treasure, some £2,000,000, was stolen from his treasury in the Abbey, temp. Edward I. When the Edwards wished to spend money for religious purposes at Westminster they handed it over, not to the Abbey monks, but to the dean and canons of their collegiate church, St. Stephen's, which was founded by Edward I. From architectural grounds and from the evidence of the fabric rolls it is certain that the western half of the nave was built in the latter part of the reign of Henry III.

The book unfortunately leaves off abruptly, like Mr. Moore's *History of Gothic Art in England*, in the middle of the fourteenth century; perhaps it is as well, if the author is really of opinion that the later Gothic is "associated with the flattest and feeblest treatment generally." However, against this saddening comment we may set the statement, on page 333, that "the Perpendicular surpasses every other style in matchless beauty of detail." The illustrations are numerous; some are very good, some, like those of

* JOURNAL, 27 July 1912.

† Architecture Religieuse, 223 and 483.

Boppard and Magdeburg, are very bad; but the extraordinary peculiarity of them is that many seem to illustrate the text of some other book, and not the present volume; at any rate, if the index may be trusted, there is no reference whatever in the text of this volume to the illustrations of Monza, Torcello, Tarragona, Gollingen, St. Omer, Treves, Chalons-sur-Marne, Lueca, Auxerre, Ypres, Darlington, Strasburg, Tamworth, and many others.

FRANCIS BOND [*Hon. A.*].

AN INDIAN ENGINEER AND ARCHITECT.

Leaves from the Life of Khan Bahadur Muncherji Cowasji Murzban, C.I.E., M.Inst.C.E., F.R.I.B.A. By his son Murzban Muncherji Murzban, of the Inner Temple, Barrister-at-Law. 8s. Bombay. 1915.

Khan Bahadur Muncherji Murzban [*F.*], whose life story is told in this book, is the distinguished Parsi engineer and architect who filled for many years the position of Executive Engineer of the Bombay Presidency Division and was afterwards head of the Engineering Department of the Municipality of Bombay—the first native Indian to hold this responsible appointment. He is the architect of several important public buildings in Bombay, and has been a Fellow of the Institute since 1889. Judging from the illustrations given in the book, his architectural work, which consists generally of a clever adaptation of Italian Gothic, is of a very pleasing character.

The author naturally handles this sketch of his father's life with a certain degree of reticence and reserve. Khan Bahadur Muncherji Murzban rose from the lowest rung of the ladder of Government service to the highest attainable in the branch to which he was attached, and the son has reason to be proud of his parent's achievements. Material for the book has been collected mainly from Government records, journals, newspapers, letters, diaries, and Parsi publications. Born in 1839, M. C. Murzban, after completing his education at the Elphinstone High School and the Poona College, joined the Government School of Engineering at Poona. In 1856 he passed the examination for admission into the Public Works Department; in 1866 he was gazetted special assistant to the Government Architectural Executive Engineer, and in 1876 was appointed Executive Engineer of the Presidency. The title of "Khan Bahadur" was conferred upon him at Delhi on the occasion of Queen Victoria's assumption of the title of "Empress of India," and he has on several occasions received the special thanks of the Government of Bombay and the Government of India for valuable services rendered to the State. In recognition of his services the Bombay Government rescinded in his favour the regulation making retirement compulsory at the age of fifty-five. Before he attained that age, however, he exercised the option of retiring on a pension, and accepted the appointment of Executive Engineer to the Bombay municipality. A Minute of Council records the Governor-General's regret that Mr. Murzban's long and meri-

torious service under Government had come to an end. In 1890 the order of "C.I.E." was conferred upon him.

Khan Bahadur Murzban held the appointment of Executive Engineer to the municipality of Bombay for eleven years, and rendered invaluable service to the city, especially by the improvements he brought about in its sanitary condition. During part of this time the district was badly ravaged by the plague, and the work of the establishment of all temporary plague hospitals and other engineering works were placed in his charge. A scheme he devised for reclaiming low-lying swamp lands resulted in the transformation of an area which had been a source of annoyance and nuisance into cultivable land capable of yielding quite a respectable annual revenue. In accordance with his suggestions important amendments were decreed in the Buildings and Streets Sections of the Municipal Act and in the By-laws thereunder. Khan Bahadur Murzban has also carried out much private philanthropic work. Through his exertions large sums were raised for the provision of sanitary dwellings for the Parsi poor. These buildings are constructed on the principle of the Peabody dwellings in England, and were all erected from his designs and under his superintendence. He was the founder of the Parsi Lying-in Hospital which has proved such a boon to the community, and not only acted as architect for the building, but collected funds for its erection. Another institution which grew out of an idea of his is the Hospital which has been established in Bombay for the exclusive use of the Parsi community.

Khan Bahadur Murzban has won the respect and esteem not only of his own countrymen, but of the numerous European officials with whom he has been associated; some evidence of this is afforded by the fact that a suburb ("Murzbanabad" in Audheri) has recently been named after him. When the time came for his retirement from the Municipal Department, he was pressed by the Bombay Corporation to continue in office. He declined, but consented to remain for another year, as no one to fill the position could be found in India, and candidates had to be sought in England. He retired finally in December, 1903, when a civic dinner and other entertainments were given in his honour.

Following the custom of the Parsi community of his young days—a custom that still prevails among the Hindus—Khan Bahadur Murzban was but a youth of fourteen when he entered the married state, and he was a father at sixteen. He is represented in a frontispiece to the book, a dignified patriarchal-looking figure, seated with his venerable wife, the centre of a group of graceful women, handsome men, and pretty children, their descendants unto the fourth generation.



9 CONDUIT STREET, LONDON, W., 22nd January 1916.

CHRONICLE.

R.I.B.A. Record of Honour : Twenty-third List.

Honours for Members at the Front.

FRY, PETER GEORGE [*Licentiate*], Major, 2nd Wessex Field Co., R.E. (T.F.), has been made a Companion of the Distinguished Service Order, for distinguished service in the field.

MAULE, H. P. G. [*F.*], 2nd Lieut. (temp. Captain), Hon. Artillery Company (T.F.), has been awarded the Military Cross.

Serving with the Forces.

The following is the Twenty-third List of Members, Licentiates, and Students R.I.B.A. who have joined the Forces, the total to date being 53 Fellows, 400 Associates, 205 Licentiates, and 264 Students :—

ASSOCIATES.

Cotman, Grahame : 2nd East Anglian Field Ambulance, R.A.M.C.

Gilmour, S. A. : Army Ordnance Corps.

Houston, Wm. W. : 2nd Lieut., 10th Royal Irish Fusiliers.

Notley, Albert Carr : Artists' Section, 104th Provisional Bn.

Pryke, Louis Edward : Lieut. and temp. Inspector of Works, Staff for R.E. Services.

STUDENTS.

Ashworth, J. R. : Lieut., 5th Bn. East Lancs. Regiment.

Bell, E. A. : Corporal, Yorks Hussars.

Couchman, H. W. : 153rd Battery, R.G.A.

Dryden, T. A. : O.T.C.

Graham, Richard David : Army Service Corps.

Greensill, G. E. A. : East Riding Field Co., R.E.

Grummont, R. T. : Artists' Rifles.

Hector, A. O. : Corporal, Princess Patricia's Canadian Light Infantry.

Jones, Harold : 19th Bn. Royal Fusiliers.

Lumb, J. H. : 2nd London R.E.

Morgan, T. M. : O.T.C.

Norris, W. G. : Army Ordnance Corps.

Paxton, N. R. : O.T.C.

Prowser, D. S. : O.T.C.

Richards, A. I. : O.T.C.

St. Leger, G. D. : 2nd Lieut., 13th Hampshire Regt.

Shipley, R. R. : 2nd Lieut., Northumbrian Div. R.E.

Smith, C. W. : Artists' Rifles.

Thistle, T. O. : R.A.M.C.

Williams, L. J. : 2nd Lieut., 2/5 Bn. Duke of Cornwall's Light Infantry.

Notes re Architects on Service.

Lieut. W. Milburn [*A.*] has been promoted Temporary Captain, Royal Field Artillery.

Mr. Alfred Hewlett Edwards [*A.*], formerly of the R.N.V.R. Anti-Aircraft Corps, has been gazetted 2nd Lieut., Kent (Fortress) R.E.



From a chalk drawing.

GEORGE ALEXANDER KAY, *Associate*.
2nd Lieut., Sherwood Foresters, 2nd Notts and Derby Regiment.
Killed in action [see p. 49]



ARTHUR MAXWELL PHILLIPS, *Licentiate*.
Captain, 11th Battalion King's Own Yorkshire Light Infantry.
Killed in action [see p. 66].

R.I.B.A. War Record.

A Record is being kept at the Institute of the names of all members of the Architectural Profession who have joined the Military or Naval Forces of the Crown for the period of the War. The list includes practising architects, their assistants and pupils, and architectural teachers and students, whether attached or not to the R.I.B.A. or other architectural body. So far, some 2,100 names have been entered on the Record, but lately, in spite of the recent boom in recruiting, very few names have been received other than those of members of the Institute. The co-operation of members and non-members is specially invited in order to make the Record known and to bring about its completeness. Names, with rank and regiment where possible, should be sent to the Editor, JOURNAL R.I.B.A., 9 Conduit Street, W.

Memorial to the late Albert Edward Lowes [A.].

A memorial tablet erected to the memory of Private Albert Edward Lowes [A.], Army Service Corps, killed in action in Flanders on the 26th April 1915, was formally unveiled by Major-General H. A. K. Montgomery in Jesmond Parish Church, on Saturday afternoon. The tablet was inscribed:—"In memory of Albert Edward Lowes, A.R.I.B.A., of the Northumberland Divisional Train, A.S.C. Born the 26th August 1888; killed in action at Ypres, 26th April 1915. A devoted Christian, a skilful architect, a good soldier. *Ars longa, vita brevis*. Erected by his mother." Canon Inskip conducted the service, and afterwards in a brief address recounted the career of the young architect. His spare time had been spent as a Territorial, and joining the A.S.C. he became associated with his old comrades of the 6th Northumberland Fusiliers, going to the front on the 18th April. In a position of great danger he was giving refreshment to wounded comrades when a shell exploded and he was killed. His portrait appeared in the JOURNAL for 12th June last.

University of London: Lectures on War Memorials.

Professor S. D. Adshead [F.] will deliver six Public Lectures on War Memorials, illustrated with lantern slides, at University College, Gower Street, on Wednesdays at 5.30 p.m., beginning 26th January.

SYNOPSIS OF COURSE.

Lecture I.—The significance of the War Memorial in its relation to the National and Political outlook. An architectural treatment is necessary to a great conception, and sculpture as making the most direct appeal to human sympathy.—Symbolic and realistic methods of expression.—The War Memorial as an incentive to patriotism and hero worship: Nelson, Napoleon, Garibaldi, Wilhelm I. and Bismarck as War Gods.

Lecture II.—The architectural attributes of War Memorials: their origin and traditional use:—The pyramid, obelisk, column and arch.

Lecture III.—The Sculptural attributes of War Memorials: their origin and traditional use: The decorated monolith, the group, equestrian statue and single figure.—Decorative symbols of war and victory.

Lecture IV.—The War Memorial as a great shrine, a Pantheon, a Valhalla.

Lecture V.—The Public Place, the Avenue, the Bridge: decorated and dedicated to commemorate a war.

Lecture VI.—The War Memorial as a monument on a battlefield, as a Mausoleum, or as the tomb of a military hero.

Admission is free by ticket to be obtained from the Secretary, Mr. Walter W. Seton, D.Lit. Application for tickets must be accompanied by a stamped addressed envelope.

Training Centres for Munition Workers.

With a view to the services of educated men and women being utilised as munition workers after a short course of practical training, classes have been established at the following educational centres, and persons willing to engage in the work should apply to the training centre of their district:—

METROPOLITAN AREA.

Battersea Polytechnic.
Brixton School of Building. (For lead burners and machine tools.)
Croydon Polytechnic.
East Ham Technical School.
East London College.
King's College. (For lead burners & machine tools.)
Northern Polytechnic.
Poplar School of Engineering.
Shoreditch Technical Institute.
South-Western Polytechnic.
Wimbledon Technical Institute.

ENGLAND AND WALES.

Aston Technical School.
Birmingham Technical School.
Blackburn Technical School.
Bolton Technical School.
Bournemouth Technical School.
Bradford Technical School.
Brighton Technical School.
Bristol University.
Burnley Technical School.
Cardiff Technical School.
Colchester Technical School.
Derby Technical School.
Erith Technical School.
Grimsby Technical School.
Halifax Technical School.
Lancaster Technical School.
Leeds Technical School.
Leeds Cockburn School.
Leeds University.
Liverpool University. (For lead burners and machine tools.)
Liverpool Technical School.
Manchester Technical School. (Lead burners only.)
Newport (Mon.) Technical Institute.
Nottingham University College.
Oldham Technical School.
Plymouth Technical School.
Portsmouth Technical School.
St. Helens Technical School.
Salford Technical School.
Sheffield University.
Smethwick Technical School.
Sutton Coldfield Technical School.
Swansea Technical Institute. (Lead burners only.)
Walsall Technical School.
Wednesbury Technical School.
Wellingborough Technical School.
West Bromwich Technical School.
Wigan Technical School.
Willenhall Technical School.
Tunbridge Wells Technical School.
York Technical School.

SCOTLAND.

Aberdeen, Robert Gordon's College.
 Edinburgh, Heriot Watt College.
 Edinburgh, Tynecastle School.
 Glasgow, Royal Technical College.

St. Paul's Cathedral.

Attention is again being called to the danger which threatens the fabric of St. Paul's, for a renewed appeal is being made for funds to consolidate the piers and buttresses, and thus secure the safety of the Cathedral for the generations to come. Two years ago a sum of at least £70,000 was asked for on behalf of the Cathedral Preservation Fund, and about half that amount had been obtained when the War interrupted the flow of subscriptions. Canon Alexander, treasurer of St. Paul's, in the course of a statement on the structural condition of the building, said that the vast and imperfectly distributed weight of the dome has caused the present problem. The pier on which work has been going forward for a long time—standing at the critical point of pressure towards the south-west—has been reported in the last few weeks to be showing even graver conditions than had been anticipated. The danger is not so much one of recent settlement as of "senile decay," accelerated by the gradual pressure of the dome, the rusting of iron, internal degeneracy, and extremely inadequate repairs executed at some earlier period. It was said recently that "only the loyalty of the materials to one another" has kept the fabric safe so far. Some of the most delicate work, thus taken in hand just in time, has already been carried out, but it is not known what difficulties may arise elsewhere.

Mr. Ralph Adams Cram on the Ruined Architectural Monuments of Belgium.

In the last issue of the JOURNAL were quoted from the *Journal of the American Institute of Architects* extracts from a Report by a German Professor, Herr D. Clemen, of Bonn, dealing with the condition of architectural monuments in Belgium after the German visitation. Professor Clemen's statements come in for some vigorous criticism from Mr. Ralph Adams Cram [*Hon. Corr. M.*] in a later issue of the *A.I.A. Journal*. Mr. Cram says:—

"Official Prussian reports do not necessarily prove anything. Accepting this one at its face value, however, it proves both too little and too much.

"Nowhere on Belgian ground have irreplaceable architectural works been lost," says Professor Clemen, "not a single one of the great monuments of Flemish or Brabant art has been wrecked. . . . In not a single case will insuperable difficulties prevent a complete restoration, either from a technical or historical point of view."

"This blanket statement (the high optimism of which must arouse our admiration) is unfortunately not substantiated by Professor Clemen's detailed admissions, which are (also unfortunately) amply supported by independent testimony and photographs. A cursory examination of his lists shows that, even if they are not wholly destroyed, such buildings as St. Peter's and the University in Lou-

vain; St. Romuald and St. Mary's, Malines; St. Gommarius, Lierre; St. Mary's, Dinant; St. Mary's and the Town Hall, in Dendermonde; St. Martin's, Alost, have all suffered damage varying from 'many traces of shrapnel' to being 'completely burned out.' Professor Clemen's optimism, which shows itself in the remark that 'The fate of much-fought-over Ypres is still undecided' is again sadly ill founded, for we know now that the great Cloth Hall, one of the most 'irreplaceable' architectural monuments in Belgium, and a unique example of early civic architecture in the Middle Ages, has been utterly destroyed, except so far as some of its crumbling and blasted walls are concerned, and the same is true of the Cathedral of St. Martin. It is to be hoped that Professor Clemen may have better ground for his cheerfulness in the case of the other monuments over which he is so reassuring.

"Whether this is so or not, his own specifications prove the case hopeless. The trouble is that he evidently accepts the now discredited nineteenth century doctrine that a clever restoration is as good as, or better than, a possibly weather-worn original. He speaks of easily achieved 'complete restoration'; of a destroyed tower where, 'fortunately, its exact counterpart remains as an indication to help in the restoration'; of shattered fifteenth and sixteenth century windows, where 'provisional measures are being taken to preserve all possible material for future restoration'; of walls and gables of 'completely burned out' buildings that still 'stand upright, and will permit the reconstruction of the roof'; of 'all this damage' that 'is easily repaired.'

"Now, against all this I put a fine saying by Mr. La Farge in the same issue of the Journal, where, in referring to Rheims Cathedral, he says, 'Restore it? How, in Heaven's name, can you restore it? Who knows enough? Nobody! There isn't an architect living who knows enough to rebuild a destroyed medieval church, . . . And if there were such a man, he still would be helpless without the artists and the craftsmen who made of the French cathedrals a true fairyland of expression.'

"Exactly! Mr. La Farge's words should be enacted into fundamental law in France, Belgium, Poland, Germany—wherever, after the War, poor, shattered buildings offer themselves for Professor Clemen's 'restoration.' Ypres is utterly gone, Arras is utterly gone, and each was a glory of perfect beauty; they may not be rebuilt; let their pitiful crags of blasted masonry stand forever, exactly as they are. Let Rheims stand as it is (with its roofs replaced, and plain glass in its shattered windows, for protection), but let us have not one cubic foot of architectural forgery. Let the churches in Louvain, Malines, Lierre, Dinant, Dendermonde, Aerschot, Alost, and the innumerable other 'ecclesiastical buildings' that have 'suffered more or less damage' but are 'not monuments of any important value from the point of view of art history,' be made structurally secure, and again 'valuable' in a measure 'from the point of view' of religion, but let them be scrupulously preserved from Professor Clemen's 'restoration.'

"They are gone, in whole or in part, as monuments of art; keep them as they are; like Rheims, they will tell their story to all eternity, and tell it better in their ruin than in any possible rehabilitation.

"Apologies and explanations neither justify nor reassure; I confess I like von Bethmann-Hollweg's frank admissions in the Reichstag better than von Mach's extenuations, and Professor Clemen's cheerful reassurances less

than the straightforward declaration of Major-General von Disfurth, which I append hereto.

"No object whatever is served by taking any notice of the accusation of barbarity levelled against Germany by our foreign critics. Frankly we are and must be barbarians, if by this we understand those who wage war relentlessly and to the uttermost degree. Every act committed by our troops for the purpose of discouraging, defeating, destroying our enemies is a brave act and a good deed and is fully justified. It is of no consequence whatever if all the monuments ever created, all the pictures ever painted, all the buildings ever erected by the great architects of the world be destroyed, if by their destruction we promote Germany's triumph over her enemies who wish her complete annihilation. The commonest, ugliest stone placed to mark the burial-place of a German grenadier is a more glorious and venerable monument than all the cathedrals of Europe put together, . . . our troops must achieve victory—what else matters?"

The Martyrdom of Belgium.

The *Times* correspondent in Paris states that the Belgian Government has compiled statistics as to the destruction wrought by the German Army in Belgium. The total number of houses and public buildings destroyed is 18,207, and details with regard to Flanders, Limburg, Hainault, and Luxemburg are lacking. The destruction was most complete at Spontin, where 127 out of 130 houses were burnt to the ground, and at Dinant 1,263 out of 1,375. At Louvain, 1,120 out of 7,433 houses were destroyed, while 1,000 houses were pillaged.

With the British Army in France.

A further instalment of the journal of Lieut. W. Henry Ward [A.], who is serving in the 10th (S.) Battalion West Yorkshire Regiment in France, appears in the *Architectural Association Journal* for December. Under date 15th November 1915 he writes:—

So long as I hold my present appointment here there is not likely to be much "battle, murder, or sudden death" about my experiences, nor even extreme discomforts or exposure.

An average day is spent somewhat like this. Wilson comes to my hut soon after 7 with a tiny jug of hot water, which I sometimes supplement by a little more, heated on a "Tommy's Cooker." After dressing I slither across the meadow, half of which has long degenerated into a slough of despond, through the stable yard, where Maule's Water Patrol lives and our two servants have a cavernous little kitchen, and over the street to Maule's office. There, if the wind is in our quarter, the room is full of smoke and the office orderly is on his knees struggling with a recalcitrant stove, which often has to be unhitched from its pipe and carried out to be dealt with summarily in the back-yard. Other days it will get red-hot without any provocation, in which case we fall to and make toast. Presently the tea and bacon make their appearance, and soon after the Patrol men and their Corporal come in to have their yesterday's reports on the streams, ponds, and ditches read, and to receive orders for the day. Meanwhile I make a tour of the village, calling on the Adjutant of the R.F.A. to find out whether his batteries really need a mess hut and a sleeping apartment of spacious dimensions for every man in them, or to tell him that they can have none at all, as the boarding has run out, or to complain that the wagons he promised to send daily to collect broken bricks from neighbouring ruins only turn up when it pleases them; then to the Adjutant of the R.E., to impress upon him that the work of hut building cannot be proceeded with without boards, corrugated iron, roofing felt and nails, even if we have a supply of

large timbers, or to try to claim a second circular saw for sawing up scantlings into weather-boarding or cutting pilkets; then to the General's A.D.C., to ask for a motor to go to one of the neighbouring towns to buy stoves; then to the Q. office, to interview the Colonel, to obtain more transport for carting materials, or decisions as to the site of a camp, or the order of importance of various works.

By this time, or sooner, an orderly has arrived from the Hutting Dumps, two miles off, with a message from the Quartermaster-Sergeant who is in charge there and of all the scattered works, and a bundle of 80 or 100 letters from the hutting party to be censored at my leisure, and taken later to the anteroom of the General's Mess to be stamped by the officer of the guard *pro tem*.

The rest of the morning is spent in interviewing quartermasters and other officers who come in to demand all manner of buildings or materials for them, and are firmly convinced that whoever else goes unhoused their unit at least must have everything it wants. They sometimes take it quite as a personal insult when I blandly inform them that there is nothing for them at the Dump, or that others have to be served first, or, on the other hand, are as grateful as if I were conferring a personal favour when I can give them something.

After lunch I often walk over to the Dump to consult with the Q.M.S., who is always cheery, resourceful, and businesslike, and keeps his gang of 160 men going at their various jobs, scattered as they are all over the divisional area. One is putting up partitions in the Divisional Baths, another erecting huts for patients at the Divisional Rest Station, another building police huts here, and officers' living huts there. Another building a new camp for an infantry brigade, and yet another repairing an old one. While, finally, one gang is kept employed putting up quartermaster's stores for each battalion in turn.

In the evening, correspondence with various units about their requirements or in connection with claims, censoring, and writing one's private letters, keeps one pretty fully occupied.

Precautions against Bombardment in Italy.

Mr. Whitney Warren, the American architect, who has been travelling in Italy and making a study of the precautions taken by the Italian Government to insure the preservation of works of art in the event of bombardment by hostile aircraft or otherwise, in a letter which has been made public, says:—

To begin with Milan and its cathedral, the entire glass has been removed, in itself a tremendous undertaking. Thus we are assured that none of it will be destroyed should the city be visited by aeroplanes, except that the temptation to destroy the beautiful is a bait so powerful to the enemy that the risk might be run in view of the magnificence of the quarry. For, in spite of Ruskin's criticism of it, I claim that no more beautiful and majestic work of man exists than this great vessel covered with its mantle of lace; nothing more vast or of proportion more perfect has man conceived. The roof is entirely of stone, so that the danger from fire, of which Rheims suffered the martyrdom, is infinitesimal. Certain objects from the treasury have been removed; otherwise the monument remains intact in its wonderful entirety.

At Santa Maria delle Grazie "The Last Supper" of Leonardo has been protected by a wall of sandbags built at a distance of about two metres from the wall and, further, by hanging a fireproof curtain in front of it. In all the churches movable objects of vertu have been placed in safety, as those in the museums.

At the Castello Sforza, which I visited under the guidance of Signor Beltrami, the Conservator, the best pictures, glass, tapestries, furniture, &c., have been removed where fire cannot harm them, for the Castello is roofed with wooden beams. The building has been admirably restored by Signor Beltrami, who has devoted thirty years to the work of rebuilding it and accumulating the treasures it contains. . . .

From Milan I ran down to the Certosa di Pavia, where the same precautions had been taken. . . .

On my way back to Venice I stopped at Verona and there found the same precautions taken in all the churches. The tombs of the Scaligers are buried to a certain extent in sand, while the statues are packed in straw covered with a thick coat of cement, sufficient to protect them against fragments of bombs. These precautions were made necessary by the fact that ten days before an enemy aeroplane had dropped a number of projectiles on the city. Should one unhappily fall upon St. Zeno or St. Anastasia, the most beautiful sixteenth-century ceilings extant will doubtless be destroyed, as no precaution against their destruction is possible. . . .

At Venice all paintings have been removed in the museums, churches, and the Ducal Palace, including even the immense Paradise of Tintoretto. Sandbags protect the exterior and the interior of San Marco, the Loggia, and the Ducal Palace, and the Colleoni Statue is covered with a roof designed to shed bombs should they fall upon it. A bomb bursting upon the cupola of St. Mark's might not pierce it, but in all probability it would dislodge the mosaics by the shock, causing them to fall and obliterating one of the glories of the universe. The only way of guarding against this is to cover the entire interior with strong canvas, securely glued against the mosaics. While this is under contemplation for here and for Treporto, it is such a formidable task that the authorities hesitate to undertake it.

As regards Venice as a whole, alas! the precautions taken are infinitesimal. I tremble at the possibilities. Should misfortune befall Venice, it would be the greatest calamity that could happen to civilisation and humanity. It is our great source of inspiration, and has been ever since it existed. That men for a noble cause be killed matters not, but that their works of vertu be destroyed is a crime abominable and a loss irreparable.

King's College Hospital.

The Hospital devoted several pages of its Christmas Number to an account and criticism of the new buildings of King's College Hospital, Denmark Hill, and mention is made of the exhaustive Paper by the architect, Mr. Wm. A. Pite [F.], dealing with the buildings, their construction and equipment, which was published in the *Institute JOURNAL* for the 3rd and 24th April last. The writer lays stress on "the educational value of Mr. Pite's creation," and characterises the work as "hospital planning at its best." "Mr. Pite," he says, "possesses the invaluable gift of taking infinite pains. When he was entrusted with the commission to provide London with the latest, most up-to-date and complete hospital buildings possible, including those for a medical school, a special pathological block, an unusually spacious out-patient department, a bathing establishment, and extensive casualties accommodation, he evidently made up his mind to set himself to the creation of a type of hospital which would mark a new departure and take a first place when compared with existing British hospitals. This policy of the architect's has been pursued with untiring zeal, and has entailed upon him an enormous amount of extra labour and special thought and study. Mr. Pite has evidently sought the counsel of those who had an intimate personal knowledge from actual and recent experience of the ever-increasing requirements which new conditions and innumerable developments in modern science have caused in methods of treatment. This is abundantly evidenced in the departments and units of this hospital. The result as a whole justifies the brains and labour expended upon the work, for the new King's College Hospital is undoubtedly a creation which everybody who wishes to

learn how to cover the maximum of ground demanded by modern conditions in hospital construction should study and master. The buildings present many new features in detail, and it is satisfactory to find that tradition has not been allowed, so far as we could discover, to interfere with or prevent a full carrying out of the whole conception of what new hospital buildings in these days should include. All honour to Mr. Pite, and warm and hearty congratulations and thanks to him for the service he has thus rendered in making a distinct advance towards the ideals which must ever be the aim of the most capable administrators and architects in collaboration, and of most practical and efficient members of the profession of medicine too."

The Pagoda, Kew Gardens.

"G.D.P." in the *Bulletin* of the Royal Botanic Gardens, Kew (No. 9, 1915), gives the following particulars of the Pagoda which forms so interesting a feature of the Gardens:—

The Pagoda was built in 1761–2 to the design of Sir W. Chambers. As originally built, the main roof with the ornamental chains and hoops to the terminal pole were of copper, double gilded. The minor roofs were covered with highly coloured iron plates, and ornamental dragons crouched at the hip terminals of the roofs. The dragons were in wood, and treated with highly coloured enamels. These features existed up to about 1820. But the iron cover plates of minor roofs and the wooden dragons must have perished and been removed soon after, when the roofs were slated.

The severely straight lines of these roofs—now shorn of dragons and Eastern colour—was much lamented, and in 1845, when "an expensive scaffold had been erected round the Pagoda to paint the wood, &c., point the brickwork and erect a new terminal pole," Sir W. J. Hooker suggested that it was a fitting opportunity to restore the original features of the Pagoda by fixing new "metal or glass" dragons to the angles of the roofs. This was supported by Mr. Decimus Burton, who, however, wished to improve on the original design. His sketch of the proposed alterations is still to be seen in No. 3 Museum. He suggested that in addition to restoring the dragons, the eaves should be curved up at the angles, and the roofs covered with copper, and that both roofs and brickwork should be painted to harmonise better with a Chinese structure. Projecting bells were to be hung at the hip terminals, and chains were to hang from the terminal pole to the eaves of the main roof. But the estimated cost of £3,500 for these alterations made their execution impossible. Sir W. J. Hooker's suggestion to replace the dragons, and so restore the Pagoda to the original design, was estimated to cost £850, and proved also too costly for acceptance.

Nothing daunted, he returned to the charge in 1856, renewing his suggestion of 1845 for the restoration of the dragons, &c., but they were again "postponed for another year," and so the Pagoda remains to this day.

On the occasion of executing the periodic painting and repairs at the Pagoda this summer—1915—investigation was made to discover the cause of so much rain coming through the roof and ceiling.

The roof generally was found to be covered with copper. It is in excellent condition, and shows no signs of dis-

turbance or repair since its original construction. The pole and its flashing, however, were found to be so defective as to need renewing at once. Authority having been obtained for this, a careful survey was made with a view to seeing how the new pole could best be got into position. All the evidence obtained, both inside and out, went to show that the old pole, about 30 feet long, had been got up by an outside scaffold and derrick, and dropped down through the hole made in the level table at the apex of the roof. But as all the painting at the various levels had been done from bracket or cantilever scaffolds; which are not adapted for, or high enough to get a pole up and into position from the outside, a plan was devised of getting the new pole up by a cantilever fixed on the top floor and passing through the window. By this the pole was hoisted through the window of the ninth floor, up through the staircase well, and through the ceiling trap-door into position.

On taking down the old pole, a pencil note was found on the lower end, under the roof, recording that "this pole was erected by J. Wickens, August 1st, 18(?)7." A knot on the top of the third figure made this date very uncertain. But fortunately, on uncovering the table round the pole at the roof apex, two more records were found of the same character, with the definite date of 1867. This definitely fixes the date of erection of the pole just taken down.

A further interesting discovery was made of a cut-in date of August 20th, 1825, on the bed-plate on which the pole stands, and it is fairly certain that a new pole would be erected at the same time as the insertion of the bed-plate.

There is evidence, therefore, that the various terminal poles were erected at the following dates—when the Pagoda was new in 1762, and in August 1825, June 1845, August 1867, and the last in September 1915.

The "life" of these poles thus varies from 20 years upwards. It is more than probable, however, that the first pole did not last till 1825, but was renewed some time about the end of the eighteenth century. The present pole is therefore the fifth or sixth pole erected, and it is hoped that as this has been creosoted it will last longer than any of its predecessors.

Reinforced Concrete Houses in Garden Suburb.

A number of houses in the Renfrew Garden Suburb have been erected in reinforced concrete from the designs of Mr. W. Inglis, architect, of Glasgow. The external walls are built of concrete blocks, with a 2-inch cavity and a total thickness of 9 inches. Externally they are treated with rough-cast. The interior partitions are formed with coke-breeze concrete slabs. The accommodation varies from two to five compartments, and each house has a bathroom, scullery, and pantry. The living-rooms in the smallest houses are 12 feet square. The rents range from £15 to £27 per annum.

Mr. McKim's Royal Gold Medal.

The House Committee of the American Institute of Architects has arranged for a cast to be made of the Royal Gold Medal presented on the recommendation of the R.I.B.A. to Mr. Chas. F. McKim in 1903, the original of which, at the request of Mr. McKim's daughter, is kept in possession of the American Insti-

tute. The cast will be gilded and appropriately placed in the Octagon (the premises of the Institute), and the original will be retained in a safe-deposit box.

The R.I.B.A. Seventy Years Ago.

Mr. Charles Lynam, F.S.A., of Cliff Bank House, Stoke-on-Trent [*Fellow*, 1888], who has just been placed on the list of Retired Fellows, was admitted a Student of the Institute in the far-off days of 1847. Recalling the event in a recent letter to the Secretary, he says: "I can truly say that my student days at the R.I.B.A. were amongst the happiest of my life. Then the rooms of the Institute were in Grosvenor Street, and a man in a velvet and white uniform opened its doors. Lord Grey was President—a good, sound, practical man and the most perfect gentleman. Cockerell, Donaldson, Tite, and others were leading lights, and it was a supreme boyish honour which always awaited my visits." Mr. Lynam is in his eighty-seventh year, enjoys almost complete exemption from bodily infirmity, and has still, he says, "a relish for our glorious profession."

Scarborough Spa Buildings Assessorship [pp. 29, 30, 55].

In the interests of accuracy it may be well to point out that Mr. Frederick Pepys Cockerell (not Mr. S. P. Cockerell) was the assessor for this competition, and that it took place shortly before his death in 1878—three years later than given at the references quoted. The drawings were sent to Manchester Square from Scarborough, and went astray for some days at Chalk Farm. I recollect Mr. Cockerell's care in examining the designs and awarding marks under certain headings to help him in the decision.

HARRY SIRR [F.].

London, Past and Present.

The Special Winter Number of *The Studio* is to deal with London, Past and Present, and will form a companion volume to the recent Autumn Number, "Paris, Past and Present." The editor announces that he is dealing with the subject in a unique and interesting manner, and is receiving the co-operation of many distinguished artists whose drawings, etchings and lithographs of London represent the most important phase of their art. In addition there will be given reproductions of old engravings and drawings showing views of London as it was during the last centuries, some of them being printed in colours. The text will be contributed by Mr. Malcolm C. Salaman, who during a lifelong residence in London has studied intimately its various aspects and historical associations.

The Society of Dilettanti's "Antiquities of Ionia."

The Society of Dilettanti have placed at the disposal of members of the R.I.B.A. 50 copies, at two guineas each net, of the new volume shortly to be issued of *Antiquities of Ionia*, of which a notice appeared in the JOURNAL for 4th December last. The ordinary publishing price is four guineas net. Mem-

bers desiring to avail themselves of this offer should send in their applications to Mr. George A. Macmillan, Hon. Secretary of the Society of Dilettanti, St. Martin's Street, London, W.C., at the very latest by the 31st January 1916.

Books Received.

- Gothic Architecture in France, England, and Italy.** By Sir Thomas Graham Jackson, Bart., R.A., F.S.A. 2 Vols. With 191 plates (6 of which are in colour), and 229 illustrations in the text. Cr. 40. Cambridge 1915. £2 12s. 6d. net. [Cambridge University Press.]
- The Arts in Early England: Saxon Art and Industry in the Pagan Period.** By G. Baldwin Brown, Watson Gordon Professor of Fine Art in the University of Edinburgh. With 8 plates in colour, 158 half-tone plates, 29 line illustrations, and 8 maps. Vols. III. and IV. 80. Lond. 1915. 21s. net each vol. [John Murray, Albemarle Street.]
- Form and Colour.** By Lisle March Phillipps, author of "The Works of Man." 80. Lond. 1915. 7s. 6d. net. [Duckworth & Co., 3 Henrietta Street, Covent Garden.]
- A Treatise on Hand Lettering for Engineers, Architects, Surveyors, and Students of Mechanical Drawing.** By Wilfrid J. Lincham. F.S. Lond. 1915. 7s. 6d. net. [Chapman & Hall, Ltd.]
- The Furniture Collector: An Introduction to the Study of English Styles of the Seventeenth and Eighteenth Centuries.** By Edward W. Gregory. With 55 illustrations of Typical Pieces of Furniture from Public and Private Collections. 80. Lond. 1915. 5s. net. [Herbert Jenkins, Ltd., Arundel Place, S.W.]
- The Mellards and their Descendants, including the Bibbys of Liverpool, with Memoirs of Dinah Maria Mulock and Thomas Mellard Reade.** By Aleya Lyell Reade. 40. Lond. 1915. [Osbaldestre House, Norfolk Street, Strand.]
- The Reinforced Concrete Regulations of the London County Council. A Handy Guide containing the full text, with explanatory notes, diagrams, and worked examples.** By Ewart S. Andrews, B.Sc. 80. 2s. 6d. net. [B. T. Batford, 94, High Holborn.]
- Thomas Jefferson and the First Monument of the Classical Revival in America.** By Fiske Kimball, Ph.D., M.Arch., Assistant Professor of Architecture, University of Michigan. Reprinted from the *Journal of the American Institute of Architects*.
- The Decorators' Diary and Trade Year Book, 1916.** Edited by Arthur Seymour Jennings, F.I.B.D. 40. Lond. [The Trade Papers Publishing Co., Ltd., 365 Birkbeck Bank Chambers, High Holborn.]

THE EXAMINATIONS.

Preliminary.

The Preliminary Examination, qualifying for registration as Probationer R.I.B.A., was held in London and Manchester on the 23rd and 28th November, 1915. Of the 30 candidates admitted 17 were exempted from sitting and the remaining 13 were examined, with the following results:—

	Examined.	Passed.	Relegated.
London	8	6	2
Manchester	5	4	1
	13	10	3

The passed and exempted candidates—numbering altogether 27—are as follows:—

- ACTON:** George Raymond, Ashford House, Rainbow Hill, Worcestershire.
- ADAMS:** Ernest Harry, 5 Beatrice Avenue, Norbury, S.W.
- AUSTIN:** Leslie Magnus, 40 Wood Vale, Forest Hill, S.E.
- BROAD:** Vivian Ernest, 6 Mulgrave Road, Croydon.
- CALTHORPE:** William Frederick Dennis, 51, Emma Place, Stonehouse, Plymouth.
- CAMPBELL:** Edwin, "Aberdour," Park View, Blyth, Northumberland.
- CHANDRA:** Ganesh Chandra, Govt. of India Scholar in Architecture, The Empiro Hindu Hotel, Fort, Bombay.
- CHICKEN:** Charles Edward, 94 Grosvenor Road, Belvedere.

- DIXON:** Percy Sidney, 123 Algernon Road, Lewisham, S.E.
- FAGG:** Tom Corbett, 44 Lewisham Park, S.E.
- GIBSON:** Reginald Campbell, 12 Brynmill Crescent, Swansea.
- HENRIQUES:** Elias Coomas, c/o Architectural Association, 18 Tufton Street, Westminster, S.W.
- HUTTON:** Lorne De H., c/o Architectural Association, 18 Tufton Street, Westminster, S.W.
- JENKINS:** Edward Leoline, 83 Nolton Street, Bridgend, Glam.
- KWOK:** Jen Sing, 63E Drayton Gardens, S. Kensington, S.W.
- MATHER:** John, 20 Barker Street, Harpurhey, Manchester.
- PARK:** Werner, 39 Dovey Road, Mossley, Birmingham.
- PRIEST:** Alfred Llewellyn, 17 South Luton Place, Adamsdown, Cardiff.
- ROBERTS:** Reginald Victor, 50 Otter Street, Derby.
- SEATON:** William George, 22 Mackintosh Road, Pontypidd, Glam.
- SIMPSON:** Douglas James, Osborne House, Cotham Park, Bristol.
- SMITH:** Leslie Fred, The Laurels, Windmill Hill Lane, Derby.
- STEWARTSON:** Arthur William, 13 Petteril Bridge Terrace, Warwick Road, Carlisle.
- SUTCLIFFE:** Edgar, 88 Industrial Street, Todmorden, Yorks.
- WEEKES:** Norman Barnett, c/o Liverpool Corporation, Engineers' Department.
- WEST:** Arthur James, 10 North Bank Terrace, Shear Brow, Blackburn.
- WHITWORTH:** Robert, 265 Wyckham Road, Reading, Berks.

Intermediate.

The Intermediate Examination, qualifying for registration as Student R.I.B.A., was held in London and Manchester from the 19th to the 26th November. Fourteen candidates were examined, with the following results:—

	Number examined.	Passed.	Relegated.
London	9	4	5
Manchester	5	3	2
	14	7	7

The passed candidates, who have been registered as Students, are as follows, the names being given in order of merit as placed by the Examiners:—

- DAVIES:** David Owen Harris [P. 1915]; 81 Calabria Road, Highbury, N.
- ROBERTS:** Walter Leslie [P. 1912]; 388 Stockport Road, Bredbury, nr. Stockport.
- BOWMAN:** William Hesketh [P. 1912]; Ivy House, 58 Bolton Road, Pendleton, Manchester.
- GEORGE:** Granville Walter Henry [P. 1912]; 132 Goddard Avenue, Swindon, Wilts.
- GRAY:** Andrew [P. 1911]; 64 Duncombe Road, Hertford.
- ROFF:** Oscar Alan [P. 1911]; 53 Meersbrook Bank Road, Sheffield.
- STONE:** John Thomas [P. 1906]; 4 Creswick Walk, Hendon, N.W.

Exemptions from the Intermediate.

The following Probationers, having produced satisfactory evidence of their training and qualifications, were exempted from sitting for the Intermediate Examination and have been registered as Students:—

- HENRIQUES:** Elias Coomas [P. 1915]; c/o Architectural Association, 18 Tufton Street, Westminster, S.W. [Bombay School of Architecture.]
- HUTTON:** Lorne De Hutton [P. 1915]; c/o Architectural Association, 18 Tufton Street, Westminster, S.W. [Dunedin School of Art and Design.]

In accordance with the special concession granted by the Council to Probationers serving with the Forces

who are eligible for the Intermediate Examination and whose Testimonies of Study have been approved, the following were also exempted:—

- ASHWORTH: James Rothwell [P. 1910]; 2 Broad Oak, Acreington. (Lieut. 5th Bn. East Lancs. Regiment.)
 BELL: Edgar Allan [P. 1913]; 31 Hanover Square, Leeds. (Corporal, York Hussars.)
 COUCHMAN: Harold William [P. 1913]; Mount Pleasant House, Mount Pleasant Road, Tottenham. (153rd Battery, Royal Garrison Artillery.)
 DEVNEN: Thomas Archibald [P. 1908]; Cloverley, Eversley Road, Sketty, Glam. (University of London O.T.C.)
 GASKELL: Reginald Robinson [P. 1904]; Albert Chambers, 11 Carr Lane, Hull. (1/1 East Riding Field Company, Royal Engineers.)
 GREENSILL: George Edward Augustus [P. 1913]; Allport Road, Cannock, Staffs. (Birmingham City Bn., Royal Warwick Regiment.)
 GRUMMANT: Reginal Thomas [P. 1914]; 27 Raul Road, Hanover Park, Peckham, S.E. (Artists' Rifles.)
 HEXTOR: Alexander Ogilvie [P. 1906]; "Pinchurst," Tilford, near Farnham, Surrey. (Corporal, Princess Patricia's Canadian Light Infantry.)
 JONES: Harold [P. 1914]; School House, Wingrave, nr. Aylesbury, Bucks. (19th Bn., Royal Fusiliers.)
 LEE: Stanley [P. 1912]; 14 Ash Grove, Newland, Hull. (Royal Garrison Artillery.)
 LUMB: Joseph Haydn [P. 1912]; 1 Whitby Avenue, Heworth, York. (1/6 2nd London, Royal Engineers.)
 MORGAN: Taliesin Morfyn [P. 1913]; "Telynfa," Aberdare. (Inns of Court O.T.C.)
 NORRIS: William George [P. 1910]; 9 Caversham Road, Kentish Town, N.W. (68th Coy., Army Ordnance Corps.)
 PALMER: Kenneth [P. 1913]; 7 Beech Range, Levenshulme, Manchester. (Royal Army Medical Corps.)
 PAXTON: Norval Rowallan [P. 1912]; 206 Ledard Road, Langside, Glasgow. (Glasgow University O.T.C.)
 PROSSER: Donald Sydney [P. 1913]; "Heathfield," Llanishen, nr. Cardiff. (Inns of Court O.T.C.)
 RICHARDS: Archibald Ivor [P. 1907]; 220 Broomwood Road, Clapham Common, S.W. (Inns of Court O.T.C.)
 ST. LEGER: Charles Douglas [P. 1914]; Fort Purbrook, Cosham, Hants. (2nd Lieut., 13th Hampshire Regiment.)
 SHIPLEY: Ralph Reginald [P. 1910]; 11 Woodbine Terrace, Gateshead-on-Tyne. (2nd Lieut., 63rd Northumbrian Division, Royal Engineers.)
 SMITH: Charles William [P. 1912]; Central Y.M.C.A., Tottenham Court Road, W. (Artists' Rifles.)
 THURTEL: Tom Owen [P. 1908]; 35 Sheepcote Road, Harrow. (Royal Army Medical Corps.)
 WILLIAMS: Leo John [P. 1912]; Branksome, Mennaye, Penzance. (2nd Lieut., 2/5 Bn. Duke of Cornwall's Light Infantry.)

Final and Special.

The Final and Special Examinations, qualifying for candidature as Associate R.I.B.A., were held in London from the 2nd to the 10th December. Of the 29 candidates admitted, 10 passed, and the remaining 19 were relegated in various subjects. The successful candidates are as follows:—

- CHEEK: Cyril Cliff [S. 1912]; 36 Crockerton Road, Wandsworth Common.
 COLBECK: Henry [S. 1909]; 26 Bramley Road, Ealing, W.
 GALE: Charles Henry [Special]; 31 Kersland Street, Hillhead, Glasgow.
 HAMILTON: Andrew Blayney [S. 1914]; Bloomsbury Club, Cartwright Gardens, W.C.
 HILL: Claude Edgar [S. 1911]; 35 Collegiate Crescent, Sheffield.
 HULL: James Vincent [S. 1913]; "Lofthouse," near Garstang, Lancs.

PICTON: Clarence Spencer [S. 1913]; 73, St. Donatt's Road, New Cross, S.E.

RAINGER: Herbert P. [Special]; Lloyd's Bank Chambers, Cheltenham.

ROUGH: James Wilfred [Special]; c/o New Zealand High Commissioner, 13 Victoria Street, S.W.

VINDEY: Gilbert [S. 1912]; 57 Eastern Avenue, Reading.

The number of failures in each subject of the Final Examination was as follows:—

A. Design.	8
B. Construction—	
(1) Foundations, Walls, Roofs, &c.	12
(2) Iron and Steel.	14
C. Hygiene	11
D. Properties and Uses of Building Materials.	6
E. The Ordinary Practice of Architecture	11
F. The Thesis	2

The Ashpitel Prize, 1915.

On the recommendation of the Board of Architectural Education, the Council have awarded the Ashpitel Prize for 1915 to Mr. Percy Joyce Adams, of "Fairmead," Woodside Road, Woodford, Essex [Probationer, 1906, *Student*, 1911, passed the Final Examination July, 1915], he being the Candidate who has most highly distinguished himself in the Final Examinations held in 1915.

NOTICES.

A GENERAL MEETING (ORDINARY) will be held on Monday 31st January 1916, when the Chair will be taken at THREE P.M. precisely, for the following purposes:—

To read the Minutes of the General Meeting (Business) held on the 29th November 1915; to announce the names of candidates recommended for admission; formally to admit members attending for the first time since their election.

To announce the name of the person the Council propose to submit as a fit recipient of the ROYAL GOLD MEDAL for 1916.

Now on View in the West Gallery.

A Collection of Drawings by the late W. Burges, A.R.A., illustrating his designs for his house in Melbury Road, and its Decoration, Fittings, and Furniture.

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Military Emergency Hospital Construction [A. Saxon Snell]	80
The Thames Barrage	97
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Chronicle.—R.I.B.A. Record of Honour.—Portraits of Members killed in Action.—R.I.B.A. War Record.—Memorial to the late Albert Edward Lowes.—Lectures on War Memorials.—Training Centres for Munition Workers.—St. Paul's Cathedral.—Mr. B. A. Gram on the Ruined Architectural Monuments of Belgium.—The Martyrdom of Belgium.—With the British Army in France.—Precautions against Bombardment in Italy.—King's College Hospital.—The Pagoda.—Reinforced Concrete Houses in Garden Suburb.—Mr. McKim's Royal Gold Medal.—The R.I.B.A. Seventy Years Ago.—Scarborough Sp. Buildings Assessment.—London, Past and Present.—Society of Dilettanti's "Antiquities of Ionia."	105
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SAINT-MACLOU, ROUEN.

GOTHIC ARCHITECTURE.

Gothic Architecture in France, England, and Italy. By Sir Thomas Graham Jackson, Bart., R.A., F.S.A. 2 Vols. With 191 plates (6 of which are in colour), and 229 illustrations in the text. Cr. 4o. Cambridge 1915. £2 12s. 6d. net. [Cambridge University Press.]

THESE handsome volumes are of much interest and value; first, because they are literature; secondly, because of numerous drawings of the author interspersed in the text; thirdly, because the text is the outcome of first-hand knowledge, either acquired by travel or by experience as a practising architect.

Treatises on architecture would only too likely have been relegated by Charles Lamb to his category of *biblia abibla*; the exceptions may be numbered on the fingers of one hand; a conspicuous one is Sir Gilbert Scott's well-known *Lectures*; another is presented in this new book on Gothic Architecture. It would be difficult to find a more definite and concise account of the logic of Gothic construction than the following:

The constructional theory of a Gothic church in perfection is this. Support should be given at those points in the articulation of a building, on which the thrusts are concentrated, by large buttresses at right angles to the wall, either directly applied to it as in the St. Chapelle and King's College Chapel at Cambridge, or, when removed out beyond an aisle, bridging it by a flying arch. These buttress-piers may be regarded as sections of the side wall, wheeled round at right angles to the axis of the building. The space vacated by them is filled by curtain walls, which receive no thrust, have only themselves to carry, and may therefore consist mainly of windows. At Amiens and Beauvais we see this theory of construction thoroughly worked out. The windows of the aisles are enormously wide and reach from pier to pier; the piers that divide them are very little wider than the outside buttress; . . . and the whole space above the triforium which closes the side vault is occupied by an immense window whose outer arch forms the wall-rib of the vault. The piers between these clerestory windows are only wide enough to receive the flying buttresses which sustain the nave vaults and descend on the massive pier beyond the aisle. . . . Every atom of material is economised, and the building consists of a series of parallel buttress-piers at right angles to the walls and the axis of the church, between which is a curtain—a *tapisserie*—chiefly of glass, to exclude weather, which in theory might be taken away without disturbing the structure. . . . Advantage was taken of every experiment . . . to economise material and to suppress all that did not form part of the constructional skeleton.

Such a building is a *tour de force* in engineering; nothing like it has ever been done in lithic construction; it does not follow, however, that because it is admirable as engineering it is equally admirable as art:

However much we may admire the science displayed in the perfected style, the question obtrudes itself whether it did not go too far. In buildings where everything depends on the equilibrium of forces, . . . where nothing is in repose, where no margin is left for safety and every part depends on the rest standing firm, so that if one gave way the rest would follow, one doubts . . . whether too much has not been sacrificed to engineering ingenuity. Experience justifies this doubt. Amiens, where the theory of stability by equilibrium of forces finds the fullest expression, has had to be held together by iron cramps all along the gallery; Beauvais and S. Denis have their buttress-piers tied together with iron to prevent their buckling; Sees cracked and settled and threatened ruin;* S. Quentin has been propped and banded with iron and narrowly escaped collapse.

Equally admirable in expression is the writer's explanation of the success of so much mediæval and the failure of so much modern Gothic:

The men of the Middle Ages . . . did things beautifully because they did them unconsciously. For they had the inestimable advantage of having no choice; they knew no other style but their own; and had no more idea of any other way of expressing themselves in stone or wood, glass or metal, than they had in words. Whereas we, with our knowledge of all the schools and all the ages, are hampered by it, we cannot forget it. . . . So long as our work is consciously imitated from what was done in other days and under other conditions, so long will it be unreal.

The architecture of the Middle Ages reflects the spirit of the age wherein the work was wrought. Indeed, up till now, in the stately march of architectural progress, every great style—Greek, Roman, Gothic—reflected the spirit of its own age. Each architect knew nothing and cared for nothing but the work of his own day; and this narrow-mindedness was his artistic salvation. We moderns know too much. We know Greek and Roman work, Byzantine, Gothic and Renaissance, Jacobean and Georgian. We have pattern books and books of recipes; we design to pattern and recipe and formula. We are the heirs not of one age, but of all the ages. Modern architecture reflects the spirit of any and every age except its own; that is the mark of marks that distinguishes it from each and every style that has gone before.

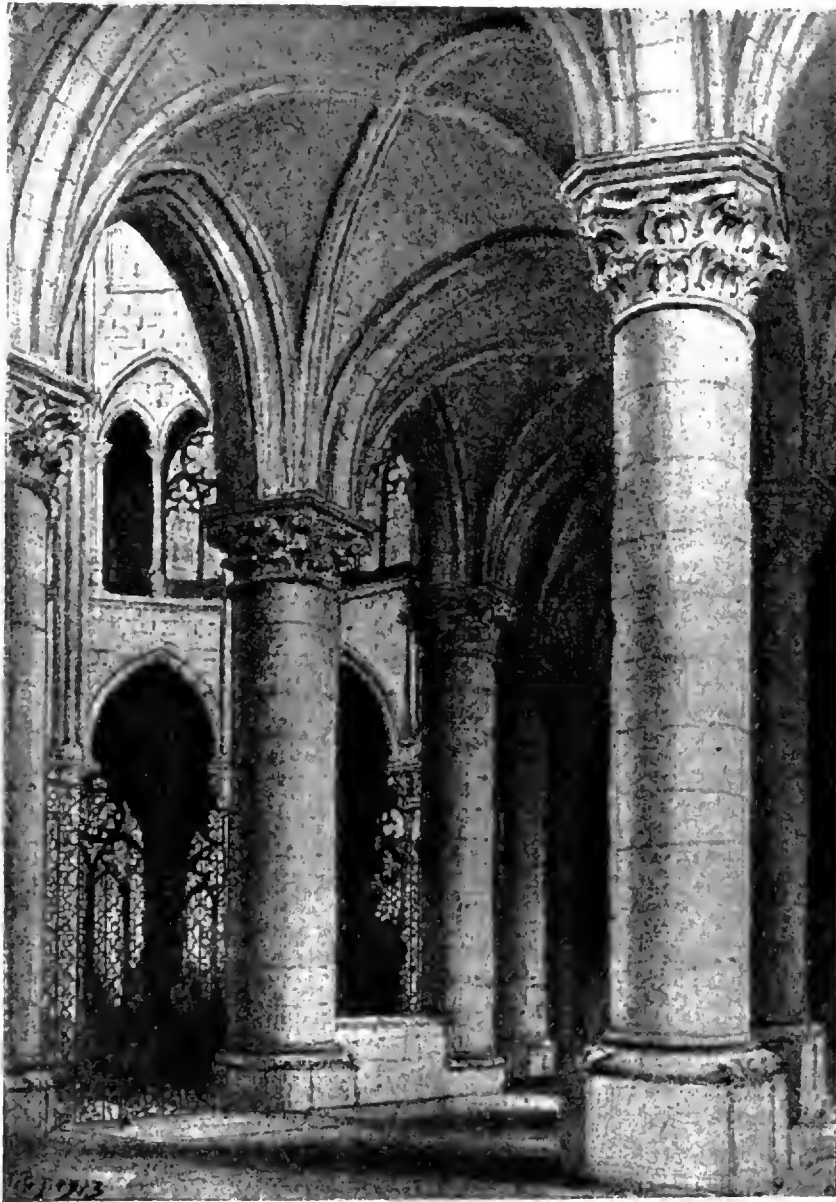
In his first chapter the writer lays stress on the freedom and variety of Gothic architecture. It would be difficult to better his words, which may be left to speak for themselves.

Gothic is the most natural style in the world, because it is the most free from convention. From this freedom results its exuberant variety. Though obeying in a general way . . . the manner of the day, no two Gothic buildings are ever really alike. The distinction of cathedrals and larger buildings is unmistakeable. . . . But this variety is not less remarkable on a smaller scale. One rarely enters an old village church without finding something . . . that gives the building an individual character. Contrast this with the immobility of architecture in Egypt, where century after century, millennium after millennium . . . the same style continued with but slight modification from what it had been under the Pharaohs thousands of years before. Contrast it with the uniformity of Roman architecture, where certain patterns of temple, theatre and basilica were stereotyped, and were carried with the spread of empire from Rome to Syria, Africa, Gaul, and Britain. Roman architecture reflects the centralisation of the empire in Rome and the immobility of imperial institutions. . . . Gothic architecture never stood still. As fast as one problem of construction was solved something beyond it invited a fresh departure. No sooner was one style perfected than the builders tired of it and moved on to something else.

To these eloquent generalisations, true as they are in the main, certain reservations must be made, and, indeed, are made to some extent by the author himself in subsequent chapters. After the building of Amiens Cathedral, for the rest of the thirteenth century and in the early years of the fourteenth, there is considerable uniformity, there is even monotony, in the Gothic design of France. Some years ago, the writer, being desirous to have a conspectus of the great work of the *Domaine Royale*, the highest achievement of Gothic architects, visited one after the other all the cathedrals of that style built in the north, centre, and south of France. After a time the tour began to lose interest; in the end it became downright monotonous. After seeing the first half-dozen fine examples, one began to find repetition, and a great deal of it. This was especially so in the interior. It was, for example, quite difficult, on one's return, to differentiate the interior of the nave of Auxerre from that of the choir of Amiens; one, in fact, was a copy of the other. On the exterior, practically every great church of the period had a periapsidal chevet with radiating chapels. Auxerre, Troyes, St. Quentin, Le Mans, Clermont Ferrand, Limoges, Narbonne, and many another were undistinguishable

* This was partly because of inadequate foundations; it was secured several years ago. S. Quentin looks horribly insecure still.

from the east, and remain so to this day. This is far from true of the earlier French Gothic; there are great differences between Noyon, Soissons, Laon, and Notre Dame, Paris, and between these and Chartres, and between all these and Bourges. But, as is admitted on page 178, "the later French Geometrical Gothic is monotonous, and the great churches built during that period are very much



T.G.J

NOTRE-DAME, PARIS: SOUTH AISLE OF CHOIR.

alike"; or, as Viollet-le-Duc puts it, "in spite of the excessive skill and logic which presides, it leaves you cold; one finds in its efforts more calculation than inspiration." Largely the reason for it is to be found in Amiens Cathedral. For in this great monument "the decisive solutions had been found"; "the whole construction is visibly expressed by the architectural form." In Amiens every problem

involved in building a great Gothic church was triumphantly solved, and there was nothing further to be done in the way of development. The only thing left to be done in French Gothic after the building of Amiens was to copy it.

On the other hand, in English Gothic, except in the fifteenth century parish churches, there is beyond doubt a freedom and variety not to be paralleled in France. The English churches, including every cathedral without exception, have the mark of distinction, or to be more clear, that of distinctiveness. The man who has visited and studied the English cathedrals does not afterwards mix them up in his memory; he is able to keep each picture distinct—*i.e.*, the English cathedrals have the mark of distinction or individuality. For instance, we never confuse with one another the interiors, though on closely analogous lines, of Beverley, Lincoln, Salisbury, the presbytery of Ely, Durham eastern transept, Worcester and Southwell choirs. Compare, for example, the choirs of Beverley and Southwell. Both are characterised by the exclusive use of the lancet window; both make use of slender detached shafts. But Southwell makes an entirely different impression from Beverley; Southwell is low where Beverley is tall; Beverley has three well-marked internal stories, Southwell is, to the eye, a two-story interior; the differences altogether outweigh the resemblances. Yet both were, more or less, pro-cathedrals in the same diocese, York; both were built for chapters of secular canons, and both went up contemporaneously. And how very different are the choir of Exeter and the presbytery of Lincoln and the nave of York! Yet they are practically contemporaneous buildings, and all three are cathedrals built for secular canons. Exeter owes nothing to York, or York to Lincoln. Yet more individual are the Gothic exteriors of England. That of Exeter reminds one of nothing else, nor do those of Beverley or Salisbury or Wells or Ely or Peterborough or Lincoln or Lichfield. Durham and York and Lincoln and Canterbury have each three towers; but who ever confounds the triplet of York with that of any of the other three? Salisbury and Norwich and Oxford and Chichester each have spires. But who that has ever seen the "star-y-pointing pyramid" at Salisbury ever confounds it with the spires of Oxford or Chichester or Norwich? In England, fortunately or unfortunately, we never had a superior person like Amiens. We never had one final summing up in one building of all that was best in our English Gothic. Wells choir marked an enormous advance about 1180. But when St. Hugh began his choir at Lincoln, some ten years later, though he came from Witham, near Wells, and must have seen the rising structure of the new Wells cathedral, his work was in no way based on that of Wells. His work in turn was a great advance, but no one imitated it. In England cathedral after cathedral went on its own sweet way, copying nobody. For that reason, small as the English cathedrals for the most part are, they are, at any rate, in the writer's opinion, more interesting as a whole than the majestic, sometimes sublime monuments of France.

In France, however, once leave the *Domaine Royale* and its scattered monuments outside the *Domaine* at Clermont, Bordeaux, Carcassonne, and elsewhere, one comes to whole districts, whole provinces of churches as different from one another as they are from the churches of the *Ile de France* and Champagne, and, being different and being varied, full of interest. To the east is a school of Gothic, vigorous in design, sound in construction, that of Burgundy. To the north-west is the lovely *patois*, as some one terms it, of Normandy; seen at its best at Rouen, Bayeux, Coutances, Seez, Norrey, and the choir of the *Abbaye-aux-hommes* at Caen. This delightful school of Normandy Gothic at last finds its historian in a chapter of detailed analysis. To the south lies Anjou; and here between Angers, once the capital of English kings, and Poitiers is another school, as different from the Amiens type as chalk from cheese; a style of vaulted churches, such as St. Serge, Angers, with neither triforium nor clerestory, nor even a flying buttress; and how can a church be Gothic without a flying buttress? It is to be regretted that the author has not analysed this Plantagenet Gothic, as the French call it, in the same detailed fashion as the Gothic of Normandy. Travel still further to the south, and still greater variety and still greater interest are found. At Toulouse, in the Jacobins' church, aisles as well as triforium and flying buttresses disappear, and the interior consists simply of two vast naves set side

by side, and separated by the tallest columns in France. At Albi yet another surprise awaits. Columns and arcades, aisles, triforium and fliers all disappear, and the cathedral consists simply of one vast vaulted hall, with its buttresses, after the manner of the Basilica of Maxentius at Rome, inside instead



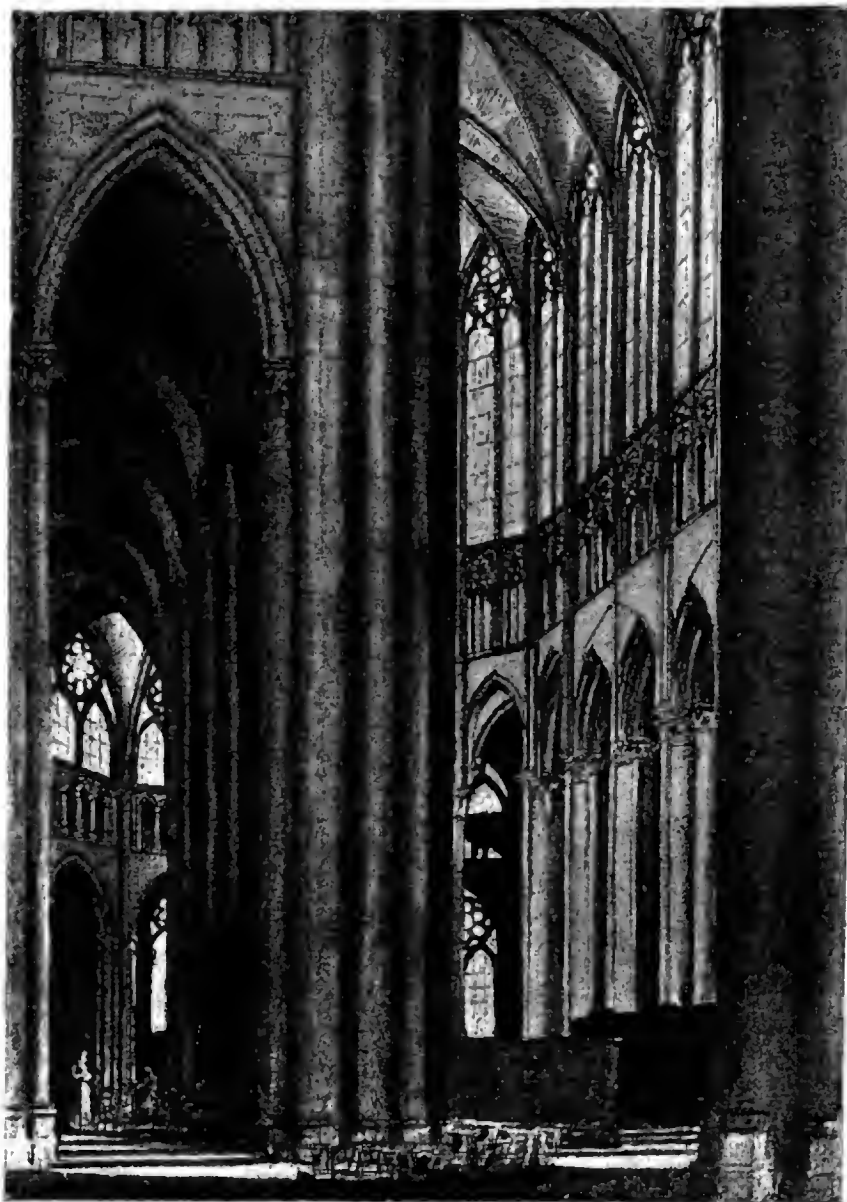
S. PÈRE-SOUS-VÉZELAY.

T.O.J.

of outside, with the spaces between them utilised as chapels. All down the west side of France the tendency to simplify the basilican plan of church grows stronger and stronger from north to south ; it is seen in the great church of La Coûture at Le Mans, then in the naves of Angers and Bordeaux cathedrals, all three originally aisled churches ; then in St. Vincent, Carcassonne, where the navé has a

span of 69 feet, and across the frontier at Gerona, Zamora, and elsewhere. There is, indeed, no end to the diversity of French Gothic when once the purism of the *Domaine Royale* is left behind.

The greater part of the first volume is naturally devoted to the supreme achievements of French Gothic, and this is followed by eleven chapters on English work, and one on French flamboyant (it is

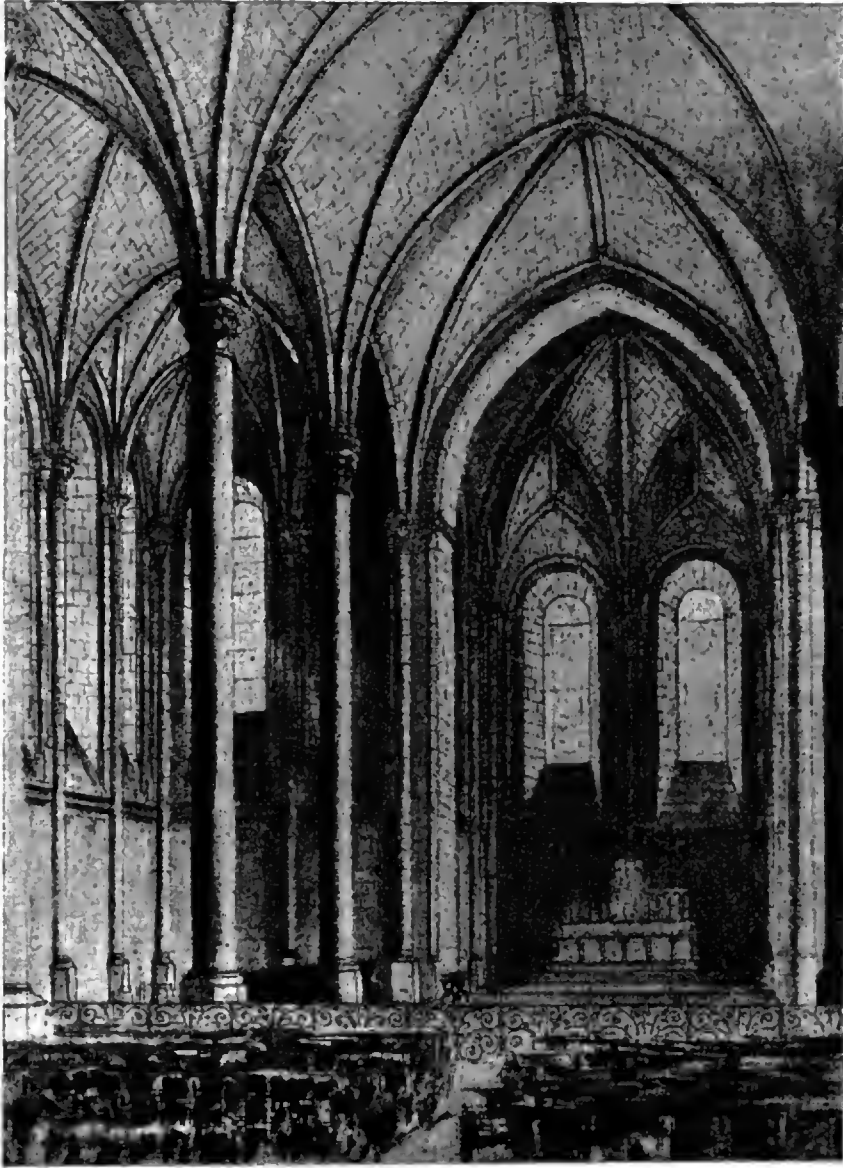


BEAUVAIS CATHEDRAL.

T.G.J.

pleasant to see the author's appreciation of the frequent poetry and charm of the later Gothic of France; he specially commends the façade of Abbeville; but one misses Gisors); then come eight chapters, delightfully illustrated, on the Gothic of Italy and Sicily; it is these last chapters which to many of us will be most valuable; for this Southern work has had few historians and fewer admirers; one is apt to hurry away from the bare Italian Gothic with all possible speed to the exquisite detail of

quattrocento Renaissance. Nobody goes to Italy to study Gothic; even Siena and Orvieto are tolerable mainly for the precious material of which they are built; and even there one cannot forget the opprobrious Oxford parallel of "streaky-bacon Keble." Whoever heard of anyone visiting Venice to see the Frari and SS. Giovanni e Paolo, or Bologna to see S. Petronio, or Florence to see the cathedral



S. SEREY, ANGERS.

T.G.J.

nave, all big and all Gothic? The omissions also are very considerable; nothing is said about Spain and Portugal, Germany, the Low Countries, Scandinavia, Scotland and Ireland; indeed, the author scrupulously confines himself to what he has seen himself, and what he knows at first hand. Nevertheless, the omission of Spanish Gothic is greatly to be regretted; Mr. Street's prejudiced and

inadequate account of the later Gothic of Spain needs correction and supplement; to many of us the late cathedrals of Salamanca, Segovia, and Barcelona seem among the noblest works of man.

As has been remarked above, the book has the great advantage of coming from the hands of a practising architect. This comes out in little practical touches all over the two volumes. Take, for example, the subject of jerry-building. In publications of our own we had given two long lists of bad work in mediæval churches; the author is able to quote more from his own experience:

In the Middle Ages there was bad building and scamping then as now. Not to go beyond my own experience, I have constantly been surprised by the carelessness of the old builders about their foundations. At Winchester they are laid on a peat bog and stand in water; fortunately the walls are unusually well built for that time, or the settlements, dreadful as they are, would have been worse, and the cathedral would long ago have been in ruin. At S. Cross the foundations are on soft wet ground, and serious settlements have taken place. At Christchurch Priory the south side of the nave has had to be underpinned. At Ashbourne the subsoil is as bad as at Winchester, and the foundations are only of rough stone loosely piled together without any mortar. At Bishop's Waltham the footings are laid on the top of the ground which is of clay. The mortar is often mere rubbish. The lovely tower of St. Mary's at Stamford, to which Sir Walter Scott used to take off his hat when posting northwards, is put together with nothing but dirt scraped off the road, containing very little lime, if any; it is the same with the tower and spire of Duddington, a few miles away.

To these examples of bad work may be added the western tower at Christchurch, recently repaired. Interesting detail is given respecting the Christchurch reredos.

It is fourteenth-century work, and at the rebuilding of the choir was refixed against the fifteenth-century east wall with iron cramps and very little bond. . . . Above the Jesse is now a group of the Holy Family with the Adoration of the Magi, which seems to be a later insertion, a mullion on each side being cut away to make room for it. This may have happened when the reredos was brought hither and refixed in the fifteenth century after the rebuilding of the choir. . . . The sculpture higher up has been much injured, and the figures of the Virgin and the Infant Saviour and many other parts are largely of plaster very badly modelled.

A few notes may be added. At S. Urbain, Troyes (p. 160), a work of extraordinary precocity, the author notes that "in the traceries I do not remember an ogee curve." An ogee arch, however, was noticed on one of the buttresses by M. Camille Enlart, and has been the subject of much controversy; if it is original, it would be about the earliest in France. Some have thought that the architect of this wonderful church, Jean Langlois, was an Englishman or had travelled in England. But surely he could have found nothing in England from which to work; nor could any Englishman have conceived such aerial design even in his dreams. The closest approach to S. Urbain may be the cathedral of Famagusta in Cyprus. It may have been designed by the architect of S. Urbain, who left Champagne in 1267 on a pilgrimage to Jerusalem. "Nothing like subordination of orders is found in classic architecture" (page 29). If by this Roman architecture is meant, it may be pointed out that arches in recessed orders are employed in the amphitheatre of Verona. "Reticulated tracery naturally admitted of only one order" (page 57). Reticulated tracery of two orders occurs in the beautiful windows of the unfinished nave of Narbonne Cathedral. The object of the triforium gallery of Westminster Abbey was to provide a chamber "capable of accommodating a great multitude of spectators" (page 276). If the author climbs up into this triforium, he will find that only from the first and second row of seats is it possible to get even a glimpse of the narrow nave far below. As has been pointed out elsewhere, the probability is that this capacious chamber was intended to be used as an upper church, as in the choir of Gloucester. "The obvious intention at Worcester was to vault the nave in the last quarter of the twelfth century" (page 183). As a matter of fact, a high vault was actually put up; the marks of its springing are unmistakeable; it was taken down and reconstructed in the fourteenth century, probably because the new vault to the east of it was at a higher level. "The Continental apsidal end of Westminster Abbey, with a regular *chevet* of apsidal chapels radiating from an ambulatory aisle, is the only example of the kind on this side the Channel" (pages 271, 219, 275). Possibly Beaulieu Abbey, Hants, is to be ruled out as not being periapsidal in the fashion of the Ile de France; but there were apsidal chevets at Lincoln, Hayles, and Croxden Abbey.

Perhaps, however, the author means that there are none such now standing. A famous monument in Beverley Minster is described as the " memorial to a Lady Percy who died in 1365 " (page 78). The work seems undoubtedly anterior to the Black Death of 1349. According to Murray's usually accurate *Guide to Yorkshire*, Lady Percy died in 1328, but the bond for the celebration of her obit



MONREALE: THE CLOISTER.

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bears the date 1336. It would seem, therefore, that the work was not begun till after 1336, and was finished, or nearly so, by 1349. Indeed, it cannot have been finished before 1340, for on the south side occurs a shield of France and England quarterly.

For the eastern bays of the nave of Westminster Abbey the author accepts the chronology of

Sir Gilbert Scott, that they were built *temp.* Edward I. Now between the choir and these bays there is evidently a break of design—*e.g.*, in the composition of the piers and the ribbing of the high vault. But that does not mean a change of monarch, but merely a change of architect, the new architect, as Professor Lethaby has shown, being John of Gloucester (1253–1262). It has been pointed out elsewhere how very improbable it is that Edward I. or any of his dynasty should have been able or willing to do anything for the Westminster monks, when they were spending huge sums on their own new chapel a few yards away. But the evidence of the Fabric Rolls is decisive. There are accounts up to the year 1272, when Henry III. died, but after that year no accounts are known which refer to important structural work at the church for two generations.

A few words may be permitted about the motives that conditioned the design of Notre Dame, Paris, Bourges, Beauvais choir, and Le Mans choir, all cathedrals of the very first rank. Bourges the author has found, as every one must, imposing in the extreme. But its legs, its piers, are intolerably stilted; as is pointed out, they occupy in height 18 parts out of 32, whereas at Notre Dame they occupy but 11 parts, at Chartres 14, at Reims 14½, at Amiens and Westminster 16. This seems to be regarded as simply a matter of bad design (page 95). It would be more accurate to regard it as design conditioned by a very important and practical consideration, that of lighting, the *bête noire* of all the early Gothic architects. Now for some reason or other, perhaps for processional ceremonial and chapels, these four churches, or parts of churches, are designed with double aisles. The earliest is Notre Dame. Here the double aisles of the nave are of the same height, and they are each some 25 feet wide (I have not the exact measurements to hand). How, then, was the nave of Notre Dame lighted laterally? It had two sources of light. One was the row of clerestory windows. But these in the original design, which still survives in the bays next to the transepts, were quite small as well as very high up. The other source of light was from the windows of the outer aisles. But these windows were some 50 feet away from the nave. Any light that had to percolate all that distance across the two aisles must have been very dim when it reached the nave. Moreover, both aisle and clerestory windows were probably filled with stained glass, which in the twelfth and thirteenth centuries was thick and opaque. So dark was the nave that it was hardly finished before the clerestory was reconstructed so as to absorb the triforium and leave room for expansion of window. Even then it was, as it remains, one of the gloomiest churches in Christendom. A generation later other great churches were commenced. All the builders must have heard of or seen the fiasco of Notre Dame. How was it to be remedied? One remedy, the favourite one by far, was to omit the second aisle, to have a single-aisled nave, as at Reims, Chartres, and Amiens. The other was to retain the double aisle, but to correct its defect; this was done first at Bourges. There it was overdone. The remedy was to make the double aisles, not equal in height as in Notre Dame, but unequal, the outer aisle very low and the inner aisle very lofty—so that the latter could have a clerestory of its own high up above the roof of the low outer aisle. The result was that the whole church of Bourges was belted round with an additional row of clerestory windows, only some 25 feet away from the nave, and not too high up to help greatly the illumination of the nave. The pity of it was the long-legged piers between nave and inner aisles. These were shortened at Beauvais and Le Mans, the latter choir the *chef d'œuvre* of French Gothic. Le Mans is to be regarded as a criticism of Beauvais, Beauvais of Bourges, Bourges of Notre Dame, Paris. On the same practical lines, and not as if it was an aesthetic freak of design, is to be explained the glazing of the triforium windows, of which the double-aisled choir of Amiens is one of the earliest examples; it provided another lateral source of light.

Far too little stress is usually laid on the influence of the lighting problem on design, or on its reverse; I mean the desire not to increase the amount of light, but to diminish it, which explains the design of so many southern clerestories (in some the windows are merely small round holes)—*e.g.*, Barcelona, Milan, Lucca, Monreale cathedrals. So far did it go in some instances that the windows were not filled in with glass, but, as in many Sicilian churches and at Troja in Apulia, as Professor Salinas

says, "the churches originally were dimly lighted by windows filled either with sheets of lead pierced with small openings, or with traceries of plaster unglazed" (page 236).

As to the author's aesthetic judgments, they have our assent to quite an amusing degree. There is hardly one of our pet aversions which he does not condemn, and one's favourites receive all the eulogy they deserve. He condemns the bad proportions of the internal elevation of York transept, and the nave he finds dull. Amiens interior fails to impress him, partly perhaps because, like that of Salisbury, it is overlighted. On the other hand he recognises the success of the Beauvais design, admitting at the same time that it is largely accidental, due to the insertion of additional piers and arches after the fall of the high vault in 1284. As for the lovely presbytery of Ely, it would be difficult, he says, to overpraise it. And he does justice to the perfect interior of Exeter.

It is as harmonious and consistent as that of Salisbury, but the difference between them is that between poetry and prose. It has not the classic grandeur of Westminster, but I know none more lovely. . . . It is long and low without any effect of depression; it is full of variety in window tracery without confusion of design; it is symmetrical without formality; and an extraordinary richness is given by the multiple shafting of the piers, by the solid marble of which they are made, by the contrasted tone of the arcades; and by the fan-like spread of the vaults, with their thickly branching ribs. The whole has a mellow softness of line and colour and a delicious harmony of parts; and not the least element in the beauty of the picture is the fine screen between nave and choir, and the lovely organ-case upon it, which divides and at the same time enhances the perspective length.

To the list of supreme interiors should be added that of Beverley Minster. Of that of Westminster it is asserted that

it has no rival in Gothic architecture for richness and beauty. Nowhere else is there such delicacy of detail, such grace of proportion, such wealth of marble columns, such splendour of diapered wall. Nowhere else is there a triforium comparable with this, with its lovely double traceries and richly moulded and sculptured arches; nowhere else are there vaults more fairly devised, or banded so choicely with stones of various colours. Compared with a bay of Westminster, one of Amiens seems poor and thin, the triforium bald and shadowless, the mouldings slight and ineffective.

On return from a tour, mentioned above, round the giant minsters of France, we next day visited Westminster. It was with some anxiety. How would it compare with what had been seen abroad? It was with considerable surprise, and with no small delight, that we found that the interior of the Abbey surpassed anything we had seen in France, as it does anything to be seen in England.

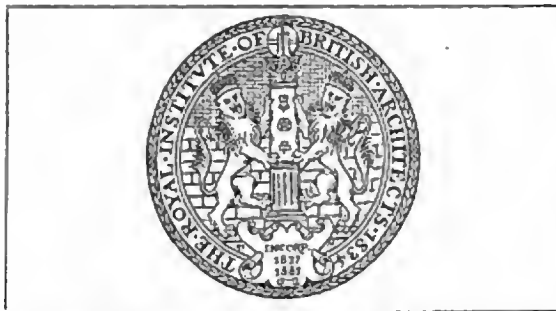
Of the French façades, Amiens is the most successful. As for that of Peterborough, it is beyond compare in all the wide world; and the author vigorously and successfully defends it against ill-informed criticisms. Of Lincoln he says that "the outside elevation of the nave is perhaps the finest example of vigorous and severe Early English work"; the "perhaps" might, perhaps, have been omitted. As to Salisbury—

The composition of the exterior, with its broken outline and varied elevation, leading up to the glorious central steeple, is perhaps (another "perhaps") without a rival: there is certainly no cathedral abroad that makes so complete and perfect a picture, . . . so well massed and composed.

Nor does he apply such terms as "debased Gothic, Gothic in its decrepitude" to such magnificent design as that of the towers of Canterbury, Gloucester, Magdalen College, Oxford, the spire of Louth, the naves of Lavenham, Long Melford, Southwold, the Royal Chapels at Cambridge, Westminster, and Windsor.

No style shows on the one hand a more complete mastery of technique, a sounder knowledge of construction, and a more perfect appreciation of the problems of good masonry, or on the other a truer sense of the beauty of outline and composition in the mass. And to turn to purely decorative design, we may claim for the woodwork of this period in screens and stalls an almost unrivalled excellence, while the painted glass, which plays a prominent part in the style, is as lovely as any the world has ever seen.

FRANCIS BOND [*Hon. A.*].



9 CONDUIT STREET, LONDON, W., 5th February 1916.

CHRONICLE.

R.I.B.A. Record of Honour.

Killed in action.

HOUGH, T. B. D. [*Student*], 2nd Lieut., 8th East Yorks Regiment. Killed in action in France on 16th January. Aged nineteen.

FERGUSON, GORDON SCOTT: Trooper, C. Squadron, 1/1st Scottish Horse. Killed in action at the Dardanelles on 7th October. Aged eighteen.

Mr. Ferguson was a pupil of Mr. W. Erskine Thomson [*Licentiate*], of Perth, who writes: "Ferguson was a smart and capable young lad in his profession, full of unbounded courage and patriotism, and one who will be sadly missed by all who knew him."

Wounded.

WALKER, DENIS H. [*Student*], Captain 1/5 Bn. A.P.W.O. Yorkshire Regiment (T.F.). Dangerously wounded, near Ypres, on 25th January.

Awarded the Military Cross.

DURRANT, ARTHUR MICHAEL [*A.*], 2nd Lieut., 8th Bn. Loyal North Lancashire Regiment awarded the Military Cross for conspicuous gallantry and resource near Frelingheim on 23rd December 1915.

When a charge placed by our miners in the German gallery had only partially exploded and warned the enemy, Lieut. Durrant, with two other officers, succeeded in placing and firing a second charge which demolished the enemy's gallery. There was imminent danger throughout of the Germans exploding a mine. For several months Lieut. Durrant has been carrying out dangerous work in almost constant contact with the enemy, and has set a fine example of coolness and determination.

Mentioned in Despatches.

WEBB, MAURICE E., Temp. Lieut. R.E., *Past President A.A.*, mentioned in Sir Ian Hamilton's Despatch of 11th December 1915.

Scientific and Industrial Research.

Details of a Scheme for the Organisation and Development of Scientific and Industrial Research, formulated by the Board of Education and presented to Parliament have been made public in a Parliamentary Paper [Cd. 8005], dated 23rd July, 1915.

The Paper sets out that special need exists at the present time for new machinery and for additional State assistance in order to promote and organise scientific research with a view

especially to its application to trade and industry. Many of our industries have suffered since the outbreak of war through our inability to produce at home certain articles and materials required in trade processes the manufacture of which has become localised abroad, and particularly in Germany, because science has there been more thoroughly and effectively applied to the solution of scientific problems bearing on trade and industry and to the elaboration of economical and improved processes of manufacture. If we are to maintain our industrial position we must as a nation aim at such a development of scientific and industrial research as will place us in a position to expand and strengthen our industries and to compete successfully with the most highly organised of our rivals. The scheme is to operate over the kingdom as a whole, the most effective institutions and investigators are to be utilised, and a single fund to be allocated for the assistance of research under a single responsible body. Provision is made for the establishment of (a) a Committee of the Privy Council responsible for the expenditure of any new moneys provided by Parliament for scientific and industrial research; (b) a small Advisory Council responsible to the Committee of Council and composed mainly of eminent scientific men and men actually engaged in industries dependent upon scientific research. The Committee of Council will consist of the Lord President, the Chancellor of the Exchequer, the Secretary for Scotland, the President of the Board of Trade, the President of the Board of Education, the Chief Secretary for Ireland, with such other Ministers and individual Members of the Council as it may be thought desirable to add. Lord Haldane, Mr. Arthur H. D. Acland, and Mr. Joseph A. Pease, M.P., are the first non-official members of the Committee. A great part of all research will be done in Universities and Colleges already aided by the State, and the supply and training of a sufficient number of young persons competent to undertake research will be secured through the public system of education. The Advisory Council's primary function is to advise the Committee of Council on (i) proposals for instituting specific researches; (ii) proposals for establishing or developing special institutions, or departments of existing institutions, for the scientific study of problems affecting particular industries and trades; (iii) the establishment and award of Research Studentships and Fellowships. The Advisory Council will also, if requested, advise the various Education Departments as to steps to be taken for increasing the supply of workers competent to undertake scientific research. The Advisory Council will act in intimate co-operation with the Royal Society and the existing scientific or professional institutions, as well as with the Universities, technical and other institutions in which research can be efficiently conducted. The Royal Society and the principal scientific and professional institutions will be asked to undertake the function of initiating proposals for the consideration of the Advisory Council, who will themselves initiate proposals and be at liberty to receive proposals from individuals. All possible means will be used to enlist the interest and secure the co-operation of persons directly engaged in trade and industry. The Advisory Council will work largely through sub-committees reinforced by suitable experts in the particular branch of science or industry concerned. Discoveries made in the course of researches aided by public money will be made available for the public advantage. The first Members of the Council are Lord Rayleigh, Mr. G. T. Bellby, F.R.S., Mr. W. Duddell, F.R.S., Prof. B. Hopkinson, F.R.S., Prof. J. A. McClelland, F.R.S., Prof. R. Meldola, F.R.S., Mr. R. Threlfall, F.R.S., with Sir William S. McCormick as Administrative Chairman. Additional members may be appointed. The Advisory Council will frame a scheme for their own guidance in recommending proposals for research and for the guidance of the Committee of Council in allocating the State funds available. The Council will examine, select, combine, and co-ordinate rather than originate. One of their chief functions will be to prevent overlapping between institutions or individuals engaged in research. Endeavours will be made to concentrate on problems requiring solution in the interest of all persons concerned in the development of all branches of scientific industry. An Annual Report, embodying the Report of the Advisory Council, will be laid before Parliament.

Scientific Research Sub-Committee R.I.B.A.

In bringing forward the scheme of scientific research, details of which are given above, the Board of Education referred to the difficulties of advancing on the lines suggested during the continuance of the War, but they point out that an effective system could not be improvised at the moment hostilities cease, and unless we are able to make a substantial advance during the present period we shall certainly be unable to do what is necessary in the equally difficult period of reconstruction which will follow the War. Work under the scheme has already begun, and the Institute has been in communication with Sir William McCormick, Chairman of the Advisory Council above referred to, with a view to co-operating in the work. Messrs. W. E. Vernon Crompton [F.], Bernard Dicksee [F.], Frederic R. Farrow [F.], Alan E. Munby [F.] (co-opted), H. D. Searles Wood [F.] (co-opted), and Digby L. Solomon [A.] have been appointed a Sub-Committee of the Science Standing Committee to meet the Advisory Council. Mr. Munby is acting as Chairman and Mr. Solomon as Hon. Secretary.

The Science and War Committees : New Officers.

Mr. Bernard Dicksee [F.] and Mr. W. E. Vernon Crompton [F.] have been elected Chairman and Vice-Chairman respectively of the Science Standing Committee, in place of Mr. W. Wonnacott, who has left the Institute, and Mr. Leonard Elkington [A.], who has joined the Army.

Captain C. Stanley Peach [F.] having resigned the Hon. Secretaryship of the Architects' War Committee on receiving his military appointment, Mr. Henry T. Hare [F.] has undertaken the office.

Civic Arts Association : Inaugural Meeting.

The Civic Arts Association was inaugurated at a meeting held at the Mansion House on the 28th ult., with the Lord Mayor as President, Mr. George Clausen, R.A., Professor W. R. Lethaby, F.S.A. [F.], Sir Cecil Harcourt Smith [Hon. A.], and Mr. Edward Warren, F.S.A. [F.], as Vice-Presidents; and a Committee, including Mr. John Lavery, A.R.A., Mr. Frank Dicksee, R.A. [Hon. A.], Mr. A. E. Richardson [F.], Mr. Harold Speed, Master of the Arts Workers' Guild, Mr. Henry Wilson, President of the Arts and Crafts Exhibition Society, and the Hon. R. B. Kay-Shuttleworth, Hon. Secretary. The main objects of the Association are set out as follows in a circular issued prior to the meeting:

Your sympathy is sought for an Association formed with a view to the amelioration of those civic arts without which no towns fit to live in can be created, extended, or improved; without which no rational interest can be bestowed upon or maintained in town or village.

Those who have formed this new Association, thus adding another to the large number of societies existing for the furtherance of the arts, would not have ventured to do so in these strenuous days had they not felt the extreme necessity which now exists for foresight and preparation in the inevitable moral and material reconstruction which must follow the War.

The organisation of all national resources for the tremendous struggle we are now engaged in—for the War and its conclusion

—is, of course, the first preoccupation of all good citizens, but if we are to attain and keep the full benefits after the War of that civilisation for which we are now making such immense sacrifices, we must look ahead. In the reorganisation that will follow this time of destruction and disturbance the arts cannot be left out of count. They are an important part of the resources of a nation. In many forms they must of necessity be applied to the strenuous work that will come with peace.

It is to try and direct in some measure such application, and to supply guidance and support to its efforts, that the Civic Arts Association has been formed.

Countless memorials of all sorts will, inevitably, be in great demand after the War, and unless steps are now taken to provide direction and advice to those who will require them, it is certain that these will generally be of the usual trivial and commonplace type to which, unfortunately, we are accustomed.

The Committee of the Civic Arts Association is devoting considerable attention to the subject of war memorials, and to those possible to people of small means as well as to the more costly civic kinds, and to forms of relatively humble private and individual memorials as well as those of a public and collective character. In regard to the latter we would suggest that in small towns or villages the best form of memorial is often some useful little building such as a school or public room, or some sort of small local museum.

It is probable that, in many instances, it may be desired to commemorate, at small cost, members of families, or of institutions, who have fallen in the War, and that, to this end, artists should be encouraged to make simple designs of appropriate character, and capable, at a trifling cost, of abundant reproduction.

It is also likely that survivors of the War may wish to possess decorative symbols of their naval or military service, and therefore that regimental and other badges, or small "statuettes" presenting naval or military types, might well be modelled for reproduction by skilled craftsmen.

The Civic Arts Association hopes to hold, in London and within the near future, an exhibition of designs for memorials of various kinds, and trusts that it may be found possible to hold similar exhibitions in other towns.

Upon the designs of such memorials artists who are prevented by age or other circumstances from military service, and to many of whom the War has brought poverty and privation, might well be employed before its termination; and in this connection we desire to point out that municipalities throughout the kingdom have spent much money and pains, by means of admirably appointed technical schools, upon the training of young men and young women in various arts and crafts, but that their efforts have stopped short at training, and that, when once trained—frequently to a high pitch of skill—young people of conspicuous ability are left without any further assistance or the provision of any employment, so that they drift away from the towns that should benefit by their talent and training to seek work elsewhere, and frequently in foreign countries.

Surely this is bad economy. Cannot the municipalities find work for the best of the craftsmen whom they train? Cannot these be employed upon the embellishment of local public buildings and in public work generally?

As to the high standard of skilled talent existing amongst craftsmen and craftswomen in this country there can be no manner of doubt. There is certainly no doubt as to this throughout the rest of Europe.

British towns are probably, in the sanitary sense, the best organised and, generally speaking, also the best policed, as they are, in the visual or architectural sense, the worst organised in the world. Less care and taste are bestowed by civic authorities upon the proportion and placing of public monuments, the ordering of spaces, and the embellishment of them, here than in any other civilised country.

The plastering of buildings, walls, and hoardings with ill-designed, harshly coloured and offensive advertisements; the sordid inadequacy of most of the railway stations, which are the vestibules of our towns; their mean haphazard approaches; the blank discomfort of our public offices, and the average

aridity of our schools, are civic misfortunes, and generally less the results of any real necessity than of the lack of care and trained imagination, and the absence of skilled advice.

The remedy is to be found in the employment of carefully selected artists, and the gradual education of public taste by this means.

The Civic Arts Association is prepared to offer the guidance of an expert advisory committee to public bodies or private persons desiring such assistance, in all questions of design, or in the selection of artists or craftsmen for specific work.

The Association is of opinion that some present employment for artists might be found in the design for and execution of various objects which might form gifts from this country to communities in the countries of our Allies, whose homes, churches, and public buildings have been ravaged and destroyed, as fraternal contributions towards their refurnishing, and a token of the cordial friendship that binds us.

The Lord Mayor, addressing the meeting at the Mansion House, said they were not a moment too soon in making preparations to meet the demand for war memorials. The very notion that the country might suffer, as in the past, from a multiplication of memorials which were ugly, trivial, and commonplace was enough to fill them with shame and alarm.

Lord Beauchamp moved that the Civic Arts Association be formed. He said the Association should encourage local authorities to use, as well as train, local artists. Most of them had opened art and technical institutes, which turned out excellent craftsmen; but, unfortunately, when they wanted some work of art executed they came to London. He could not understand why people who bought pictures painted hundreds of years ago should be called art patrons. He wished to see more support given to contemporary art, and especially more encouragement given to craftsmen. It was important also that the craftsman should be given due credit for his work.

Professor Selwyn Image, in seconding the motion, said the last thing that people would desire was that their offerings to the memory of the dead should be conventional trade products.

Professor W. R. Lethaby urged that every town and village should form a committee of public welfare, and that every city should have a society like the excellent London Society, to look after its amenities. The arts that mattered and needed cultivation were the civic arts. They were the arts of civilisation; and the arts of civilisation were civilisation itself.

Mr. George Clausen, R.A., said that several members of the Royal Academy, including the President, were in sympathy with the objects of the Association, and most earnestly hoped that before very long there would be given at the Academy an exhibition of arts and crafts. It was generally recognised that the impulse to revive arts and crafts, which was now being felt all over the world, had originated in England; and though our painting, sculpture, and architecture were looked upon by foreign artists as nothing out of the way, they agreed that what was interesting and typical in English art was to be found in the work of the small band of men who were reviving and continuing the old domestic arts of the country. As a rule our people did not know of the great ability in domestic arts which was to be found in this country, and he welcomed an Association which would bring it to the general notice.

Mr. St. Loe Strachey said there was nothing more difficult to write and yet nothing more necessary than a good inscription on a public monument. That it was difficult to write concisely and in the memorial spirit in

English might be true, but it was a difficulty which could and must be overcome. He suggested that besides committees to superintend the work of the figurative arts, they should have a committee of men of letters to give advice, assistance, and criticism as to what should be said on local monuments.

Artists' War Relief: Decoration of Schools.

With a view to finding work for artists in distress through the War, the Professional Classes War Relief Council some weeks ago approached the London County Council with a suggestion that the walls of certain of their schools might be decorated with friezes and panels. It was promised that the L.C.C. would be put to no expense in the matter, that the work would be executed away from the school buildings, and fixed during the school vacations. The offer was accepted, and the Education Committee have discussed the matter with Sir Aston Webb, K.C.V.O., C.B., R.A., Mr. W. R. Colton, A.R.A., Mr. John Hassall, and Mr. M. Spielmann, as representing the Professional Classes War Relief Council. The Committee report that they selected eight schools situated in poor districts, and the representatives of the War Relief Council, after visiting several of the schools with a view to deciding which would be best suited for their first scheme of decoration, have recommended the first floor hall of the Devon's Road School (Bow and Bromley). They have submitted in outline an "Empire" scheme of decoration illustrating life and industry in the British Dominions beyond the seas. The scheme has been approved, and the War Relief Council are taking steps to carry out the work.

The London Society's Contribution to the Development of London.

The London Society has issued the following statement showing the work it is doing during the War:—

The ordinary activities of the Society were naturally greatly curtailed at the outbreak of the War; in consequence a meeting was called, when it was decided to utilise the period of enforced leisure by producing a Development Plan of Greater London, prepared with a view to the future, showing the main arterial roads proposed and now under discussion, and various other improvements which will become necessary if the growth of Greater London is to be in any way controlled. Such a comprehensive plan has never yet been prepared, and it was felt, if this could be done, the Society would have something to show at the conclusion of the War, together with the fact that during this trying time employment would have been found for a certain number of architects who sorely needed it.

The idea was at once enthusiastically taken up. A special fund was started, which soon reached £500, and has since been raised to £900, thanks to the help of the Artists' General Benevolent Institution, the National Relief Fund, the Architects' Benevolent Society, and donations received from members of the Society, including the President, Lord Plymouth. A band of specially qualified directors was quickly formed, consisting of Professor Adshead, Messrs. Arthur Crow, W. R. Davidge, H. V. Lanchester, H. J. Leaning, and D. Barclay Niven, with Mr. A. E. Richardson as Honorary Acting Secretary. The Plan Committee has met continuously, and great progress has been made with the work.

When finished, the plan will contain imaginative proposals, founded on ascertained facts, laid down for the first time in complete form; the arterial roads recommended by the London

Traffic Branch of the Board of Trade, with suggested modifications; also an endeavour to co-ordinate the numerous town-planning schemes round London, together with an attempt, by means of a Parkway system, to link up as far as possible the 2,000 open spaces in Greater London.

Thus for the first time the future requirements of Greater London will have been studied as a whole and shown in a complete and comprehensive manner. The cost will be about £1,000, apart from the cost of reproduction. This large sum is being provided independent of the Society's funds, and spent entirely in giving employment to the draughtsmen engaged on the plan, the Directors and others interested giving their time and services without charge, and the Society lending their premises free of all expense.

To give some idea of the extent of the work which is being attempted, it may be stated that when completed the Plan will be about 20 feet square, the ground treated covering an area of approximately 700 square miles. The plan can be seen in course of preparation by members and friends at any time at the Society's offices, and at the conclusion of the War it will be publicly exhibited as the Society's contribution to the development of London.

It will thus be seen that the Society is accomplishing a two-fold object by its present efforts, and funds are now urgently needed to ensure the worthy completion of this great philanthropic scheme, and should be sent to the Secretary of the London Society, 27, Abingdon Street, S.W.

The Institute of Builders' Scheme of Apprenticeship.

Mr. Thomas Costigan, Secretary of the Institute of Builders, writing on the dearth of apprentices in the building trade, says that early in 1912 the Institute of Builders submitted to the London Education Authority a constructive scheme of apprenticeship that would enable suitable boys to learn a trade under proper conditions directly they leave the elementary school, on the lines following:—

(a) That the school age should be raised for such apprentices by two or even three years, so as to strengthen supervision and maintain, for part at least of the apprenticeship period, some connection between school and workshop.

(b) The indentures recommended by the Institute of Builders were for a period of five years in workshops and on jobs, so that a boy could learn his trade under actual working conditions.

(c) That time on two afternoons in each week at full pay should be given to the study of the theoretical side of the chosen trade during the first two or three years of the apprenticeship term, so that theory and practice should advance together.

(d) Where a premium is required with an apprentice the Institute scheme would apply to the payment of such premium a part of the money at present spent by the education authority in scholarships and similar rewards, sums now used mainly in subsidising non-industrial branches of higher education or in maintenance grants.

(e) The connection between school and workshop, referred to in clause (a), could be maintained by a small Voluntary Advisory Committee of managers and employers for each district or school division.

(f) The Institute scheme also included a schedule of premiums and rates of wages; these rates of pay are a very considerable advance on the wages until now being paid generally in the building or any other trade.

The weekly wages in this schedule starts at 8s. 4d. per week of fifty hours, and in the fifth year rises to 27s. 1d. per week (or 6½d. per hour), and while they do not and cannot compare with boy wages at present obtaining owing to war conditions, the parental sacrifice of present advantage for the ultimate good of the boy is surely not a heavy one.

(g) Where no premium is paid the Institute's schedule of wages is rather less, so as to provide for payment of premium out of wages.

(A) A further part of the scheme is the provision of a bonus of £25 to the apprentice on completion of indentures for the purchase of tools, etc.

These, says Mr. Costigan, are the main points of the scheme which was first put before all the Borough Councils of London and approved by twelve or thirteen of them, only one Council having returned a definite negative and the rest making "no order."

The scheme has been carefully considered by educational experts and is considered to contain the nucleus of a workable permissive scheme which would gather in the boys between fourteen and fifteen years of age and take them direct from school to a trade, and thus prevent the wastage of good material drifting into "dead-end" jobs, having no ultimate benefit when the boy becomes a man, with a man's opportunities and responsibilities.

The scheme has been before the Higher Education Committee of the L.C.C., and has been explained in conference with the Committee, but, while sympathetic, the Committee held that they had no statutory power to adopt it.

The Institute of Builders, concludes Mr. Costigan, has, therefore, this year decided to request the co-operation of the National Federation of Building Trades Employers of Great Britain and Ireland in arousing interest in support of the scheme by the building trade throughout the country, with a view to Parliamentary action and the provision of the necessary permissive powers in the next Education Bill that must come before Parliament and the country after the War.

District Surveyors under the London Building Act.

The Building Acts Committee of the London County Council report the following appointments to District Surveyorships in London:—

In order to fill temporarily vacancies for District Surveyors, we have appointed Mr. S. F. Monier-Williams, District Surveyor for the District of St. George, Hanover Square (Belgrave and Piccadilly portion), to be interim District Surveyor for the District of St. Pancras, South, and Mr. E. W. Lees, District Surveyor for the District of St. Pancras, North, to be interim District Surveyor for the District of Stoke Newington. Each of the appointments dates from 1st December, 1915, and will continue during the pleasure of the Council.

We have appointed Mr. C. W. Surrey, District Surveyor for the District of City of London, West, to fill temporarily the vacancy caused by the death, on 13th October, 1915, of Mr. E. R. Hewitt, District Surveyor for the District of St. Saviour and St. George-the-Martyr (part), Southwark, and North Lambeth. We have in this case, and also in the case of the vacancies mentioned above, appointed existing District Surveyors temporarily to the positions, as we have thought it unwise to recommend the Council to appoint any new District Surveyors during the war.

We have extended for another year the period of office of the undermentioned District Surveyors, who have passed the retiring age limit—Mr. F. Hammond (District of Hampstead), Mr. H. Lovegrove (District of Islington, South, and Shoreditch), and Mr. T. E. Mundy (District of Chelsea).

We have reappointed for another year Mr. J. Goodchild, interim District Surveyor for the District of Islington, North, and Mr. A. W. Tanner, interim District Surveyor for the District of St. George-in-the-East. These two officials have passed the retiring age limit, but their services have been retained for several years past in a temporary capacity.

We have consented, under section 142 of the London Building Act, 1894, to the appointment of deputy District Surveyors in 12 cases.

CORRESPONDENCE.

St. Paul's Watch.

To the Editor, JOURNAL R.I.B.A.—

SIR,—Three months ago you kindly published an appeal for volunteers to help the St. Paul's Watch to guard the Cathedral against fire, which may be caused by hostile air raids at night.

More men are urgently needed to protect the building adequately and to make full use of the very complete provision of hydrants with which it is equipped. Definite war service, and winter illness, have decreased the number of the watch at a time when the long nights have increased our duties, and although the guard is considerably larger than when the last appeal was made, there is a very serious need for more men to make the watch thoroughly efficient.—Yours faithfully,

H. AUSTIN HALL.
WALTER TAPPER.

The Hon. Sec. of the St. Paul's Watch, Mr. Laurence A. Turner, 58 Doughty Street, W.C., will be glad to receive names and give information.

MINUTES.

At a General Meeting (Ordinary) held Monday, 31st January 1916, at 3 p.m.—Present: Mr. Ernest Newton, A.R.A., President, in the Chair; Mr. E. Guy Dawber, Hon. Secretary, and Fellows and Associates.—the Minutes of the Meeting held 29th November, having been published in the JOURNAL, were taken as read and signed as correct.

The Hon. Secretary announced that since the last meeting news had been received that the following members serving with the Forces had been killed in action—viz., Private James Everett Bownass, of Princess Patricia's Canadian Light Infantry, Associate; Capt. Arthur Maxwell Phillips, of the 11th Bn. King's Own Yorkshire Light Infantry, Licentiate, and 2nd Lieut. T. B. D. Hough, of the 8th East Yorkshire Regiment, Student.

On the motion of the Hon. Secretary, it was resolved that the deep regrets of the Institute for the loss the profession had sustained by the death of these gallant young men be entered on the Minutes of the Meeting, and that a message expressive of the Institute's sincerest sympathy be forwarded to their nearest relatives.

The decease was also announced of John Ely, Fellow, Past President of the Manchester Society of Architects, who served for a time on the Council of the Royal Institute, and it was resolved that the regrets of the Institute for the loss of its esteemed Fellow and past Member of Council be recorded on the Minutes, and that a vote of sympathy and condolence be passed to his relatives.

Further, the decease was announced of John Walton Taylor, Fellow; Fred William Burwell, Fellow; Baldwin Brown, Associate; Robert Dewar Nicol, Associate; William Whymper, Associate; and Harry William Wakeman, Licentiate.

The Secretary announced that the following gentlemen had been nominated for election:—As Fellows, John Fairweather, Associate 1894; Ernest Budge Glanfield, Associate 1911; Edward Percy Hinde, Associate 1888; Harry Garnham Watkins, Associate 1895; As Associate, James Hastie Wardrop, who passed the Special Examination last June.

The Secretary announced that the Council had reinstated Mr. Alexander Robert Meldrum as a Licentiate of the Royal Institute.

The President announced that the Council had unanimously

nominated Sir R. Rowand Anderson, LL.D., Fellow, as a fit recipient of the Royal Gold Medal for the current year, in recognition of the merit of his executed work, his services to architectural education, and his high character and lofty ideals in the art of architecture.

The President called attention to the drawings hung on the walls of the room, representing the designs and working drawings by the late William Burges, A.R.A., for his house in Melbury Road, Kensington, its decoration, fittings and furniture, and stated that these drawings had come into the possession of the Institute, through the instrumentality of Mr. R. A. Briggs, Fellow, having been presented by Mrs. Wentworth Watson, a niece of Burges, who now owned and occupied the house. On the motion of the President a very hearty vote of thanks was accorded to Mrs. Watson for her valuable and interesting present, and to Mr. Briggs for his kind thought and the trouble he had taken on the Institute's behalf.

The President having mentioned that the Institute had lately acquired, through the generosity of various donors, several drawings and sketch notes by the late Norman Shaw, R.A., G. E. Street, R.A., and W. Eden Nesfield, a vote of thanks was passed to the donors by acclamation.

The proceedings terminated at 3.15.

NOTICES.

Election of Members, 28th February, 1916.

The following candidates, found by the Council to be eligible and qualified for election in accordance with the Charter and By-laws, have been nominated for election:—

AS FELLOWS (4).

FAIRWEATHER: JOHN [Associate, 1894]; 136 Wellington Street, Glasgow; and Glengarry, Stepps, near Glasgow.

Proposers: James M. Monro, John Watson, W. G. Rowan.

GLANFIELD: ERNEST BUDGE [Associate, 1911]; 72 Oxford Street, W.; and 12 Shalimar Gardens, Acton, W.

Proposers: Horace Field, John Slater, George Elkington.

HINDE: EDWARD PERCY [Associate, 1888]; President, Liverpool Architectural Society; 9 North John Street, Liverpool; and 15 Inglemere Road, Rock Ferry, Birkenhead.

Proposers: Haatwell Grayson, W. E. Willink, Henry Hartley.

WATKINS: HARRY GARNHAM [Associate, 1895]; Prudential Buildings, and 14 Newstead Grove, Nottingham.

Proposers: Robert Evans, Henry V. Ashley, Albert N. Bromley.

AS ASSOCIATE.

WARDROP: JAMES HASTIE [Special Examination, June 1915]; Middle Street, Arcot Vale, Melbourne, Australia; and 8 Mecklenburgh Street, London, W.C.

Proposers: L. Stanley Crosbie, Arthur J. Davis, A. R. Jemmett.

On View in the West Gallery.

Designs and Drawings by the late W. Burges, A.R.A., for his house in Melbury Road and its Decoration, Fittings and Furniture.

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R.A. Sculptor. Travelling Student. Ventilator.
 SKETCHES FOR DECORATIONS TO DOORS OF LIBRARY BOOKCASES IN WILLIAM BURGESS' HOUSE.

THE R.I.B.A. COLLECTION OF ARCHITECTS' PLANS AND DESIGNS.

By HALSEY RICARDO [*F.*].

THERE has been made lately an accession to the above collection of a considerable quantity of drawings, mainly working drawings of past-masters in the art of architecture. The original collection—a very valuable one—contains examples from Palladio, Bernini, Bibiena, and other less well-known Italian architects—whilst, on the English side, it has specimens from Inigo Jones, Sir Christopher Wren, John Webb, Elmes, Cockerell, Decimus Burton, and others more nearly approaching our own time. The recent acquisition—due to the generosity of the several donors—consists of drawings and sketch-notes by Norman Shaw, R.A., and G. E. Street, R.A.; drawings by Wm. Burges, A.R.A., W. E. Nesfield, and Philip Webb. Others, by different masters, are also promised. The notebooks form valuable records of buildings, and parts of buildings, existing half a century ago, some of which exist as examples of mediæval work no longer; and they also show what an immense deal of work an architect undertook in the way of record and analysis, in order to equip himself for the actual practice of architecture. The drawings are, as above said, working drawings—some of them the contract plans—for buildings about to be constructed, and they exhibit the means taken by the designer to get his visions carried into actuality. They show also the process of conception, the insistence on modifications, expansions, and retrenchments of the original schemes, and they show by comparison with the actual building how much further instruction was supplemented.

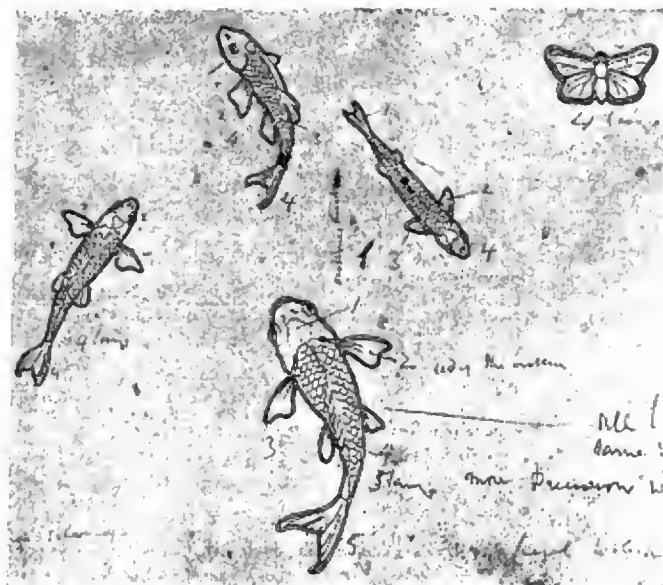
But beyond these considerations of what I would term their face value, this Institute collection of architects' drawings, for the builders' use, forms an important contribution to Art, and that is, really, to the social history of England. There is no other such impartial and unimpeachable testimony to the state of social life in the past as the changing characteristics in contemporary Art, Music, and Poetry; and foremost amongst these comes Architecture. Annals, histories, pictures of the times, are all suspect, are tinged by the inevitable bias in the writers' minds: we see the conditions through others' eyes, not the conditions themselves: we have to accept the conclusions drawn, since we cannot get at the evidence itself.

But buildings embody the spirit of the times simply and frankly, without any question of party or political theory. They exhibit the mode of life as accepted at that time, the requirements of life, the social ideal, and also the status of the building crafts at any particular time. Consider how the

passions of the last hundred years, for instance, the growth of Dissent, the Corn Laws, the Reform Bill, the Tractarian Movement, the Education Act, and so forth, have been embodied in brick and stone for the historian to mark and appraise. The value of such evidence is that it is unassailable. But the student of history can get a further side-light on his subject by his study of architectural drawings. They show—ingenuously—the way in which a master, such as Sir Christopher Wren, got his work executed; how much of his designs he dictated; how much he left to the craftsman in his employ; not only how much, but also the nature of the work so entrusted. From them we can learn what a substantial backing the architect of that day received from his workmen. The mediæval tradition of masonry, woodwork, smithing, was still there—ready to respond to indications given by the architect.

Every age, every generation even, has its own methods of reaching actuality through the medium of plans and details presented on paper: these drawings have a pathetic eloquence to those who can hear them. The disappearance of the workman as a creative ingredient in the art of building; the individual handling of the material by the worker, obliterated or neglected; the varying standards of finish; the intrusion of machine-worked and machine-made products; these voices from the gathered papers—free beyond all question from any propagandist desire or attempt to touch other than the immediate problems before them—give to the student of political and social economy data far more trustworthy than any other papers extant, if we take into account with them such exact statement of disbursements available in connection. For these documents the Institute forms a natural home: it offers care and shelter to representative specimens, whether they be the products of its own members, or of masters outside its own body.

There, in the Library, the student—architectural, historical, political—can consult these drawings; compare the methods of the past masters with his own; construct his picture of England in the last and past centuries; determine the resistance to and the acceptance of the help given by machines; each digging in this quarry for his own special vein of ore, with some thanks to the Institute for preserving a source of information generally neglected, and often allowed by architects to be heedlessly destroyed.



SILVER INLAY DECORATION TO TIP-UP BASIN IN GUEST'S ROOM,
WILLIAM BURGES' HOUSE.

THE ART OF WILLIAM BURGES, A.R.A. : AN APPRECIATION.

By R. A. BRIGGS [*F.*].

THE Library of the Royal Institute of British Architects has recently been enriched, through the kind munificence of Mrs. J. Wentworth Watson (niece of the late William Burges), by the addition of the original small-scale and full-size drawings of the house Burges built for himself in Melbury Road, Kensington, W. A few of the most characteristic drawings are now exhibited in the Common Room of the Institute, and a visit would well repay anyone interested in colour decoration, as the drawings show so clearly Burges' high artistic ideals and aspirations. The decorations are full of careful thought and earnest enthusiasm, and they show what a mighty master of colour he really was.

Burges' work was founded on the thirteenth-century style, but he had a strong leaning towards Greek and Pompeian work, as may be seen from the colonnade to the Porch, and the floor and thresholds of the Hall. It is reported that he said, if he had not designed his house in the thirteenth-century style, he would have done so in the Pompeian. He was, in any case, very eclectic in his ideas and tastes. For example, he introduced Mushrebeeyeh work—the lattice work of Cairo—into the shutters of some of the windows and into the furniture, in some instances filling the interstices with coloured glass. He also made use of Japanese *cloisonné* enamels, Indian bronze and jade work, and Turkish embroideries. And the wonderful thing was, that they all harmonised and produced a blaze of polychromatic and dazzling display that was almost staggering. The writer of this article remembers them some twenty years ago, when they were in the zenith of their pristine beauty. At the present time they have considerably toned down, but the effect at this time is most entrancing, the decorations being now rich and, although mellowed by age, still showing the glowing wealth of deep brilliant colour through the dusky mist imparted by our smoky old London atmosphere.

Although Burges indulged largely in gold in his decorations, it was always toned down by arabesques, lines and patterns in red or blue on the flat surfaces, and by black or brown lines on the carving. The recessed or undercut parts were usually coloured red. Nearly all the draperies to the figures had diaper patterns on them, several examples being exhibited, with special notes by Burges for the painter who did the work. The groundwork of the furniture was generally of oak, first painted a bright red (this was a law of the Medes and Persians to Burges) and then gilded, except in one room—his "Own Room"—which was painted a crimson-red, with patterns and arabesques in gold, and finally varnished to a "carriage-panel" surface. Pieces of bevelled, silvered plate glass were largely made use of in the furniture, especially in regard to the coves, backs and ceilings to the shelves and cases, etc. Burges was not above using blue, red and green tinsel-foil behind thin, plain glass in small sunk panels; and crystal balls were brought into play as knobs to bed and seat posts, to enhance the effect and produce shimmering points of colour and light. He was also very fond of making use of circular, convex, silvered mirrors, and he introduced one into the north-west gable of the house, which gives a wonderful effect when the sun is setting, reflecting its rays in a varied manner.

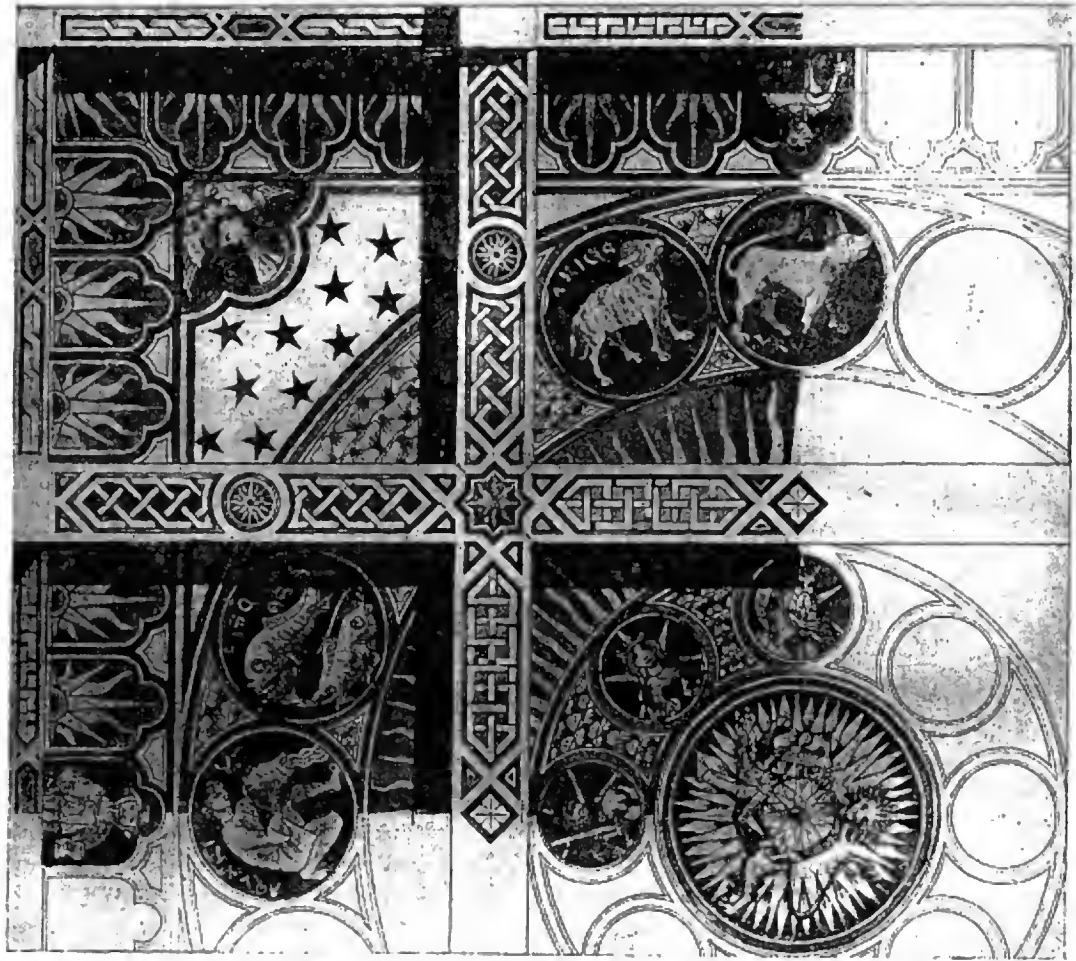
Such were only some of the methods Burges employed, to gain what he loved best—brilliancy and colour.

* * * * *

For a description of the house and the drawings exhibited, it is proposed to deal with the latter in the order in which they are hung—i.e., from left to right.

The first set of drawings are the contract working $\frac{1}{4}$ -in. and $\frac{1}{2}$ -in. scale drawings of the house, which show it to contain, on the ground floor, a drawing room, dining room, library, hall and staircase. On the first floor are three bedrooms, described by Burges as "The Guest's Room," "Own Room,"

and "The Venus Room." There are a bath room and lavatory on this floor. On the second or attic floor are "The Day Nursery," "The Night Nursery," and three Servants' rooms. The house outside is faced with red bricks (London gauge) with Bath stone dressings. The roofs are slated with green slates. A flight of stone steps leads up to the porch, to which a temporary oak door is hung. The letter plate, on vertical hinges, is of bronze, with a chased figure of Mercury and a frame of porphyry, let into the wall with a bronze rim. The bell-pull is a simple chain with a bronze ring, on which, inlaid with silver, is the name "W. Burges." The porch floor has a panel in mosaic of "Pinkie," a favourite white poodle (page 135), cartooned by Mr. H. W. Lonsdale, and recalling

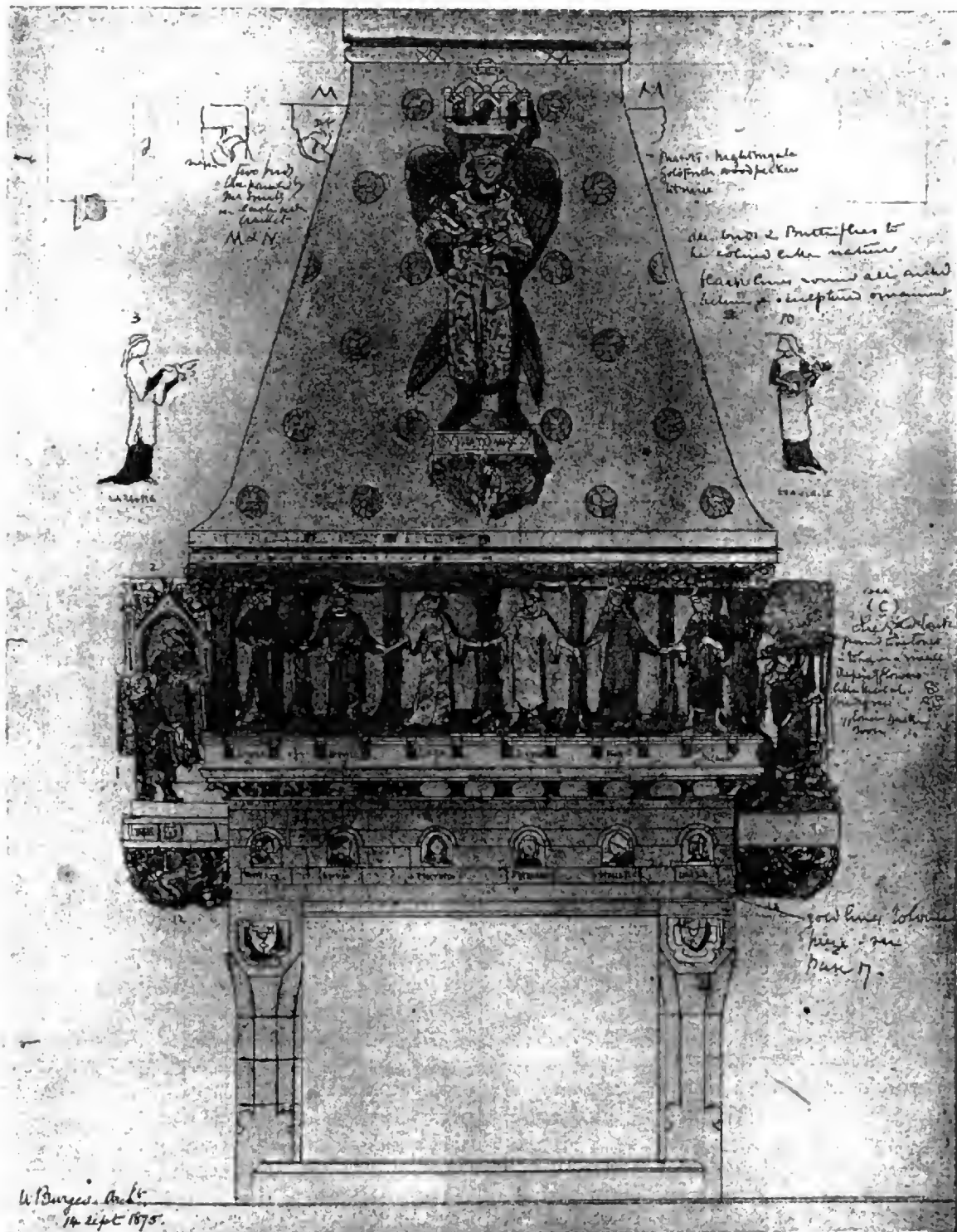


DINING-ROOM CEILING, WILLIAM BURGESS' HOUSE.

the *cave canem* floor found at Pompeii. Facing the porch door is a white marble seat, with a column of white marble. It was intended to place on this column a bronze figure of Diogenes with a lantern, which was to give light to the porch, "looking for the honest man." It was also purposed by Burges to cut away the brick-work of the porch and line the walls with marble, inserting at several points small bronze panels or plaques. The ceiling would probably have been covered with bronze plates. The entrance door is of bronze, with panels representing "The Four Ages," inlaid with silver lines, etc.

The drawing room, which was not completed at the death of Burges, faces the north. It has three three-light windows, the upper portions being filled with stained glass, the cartoons for which

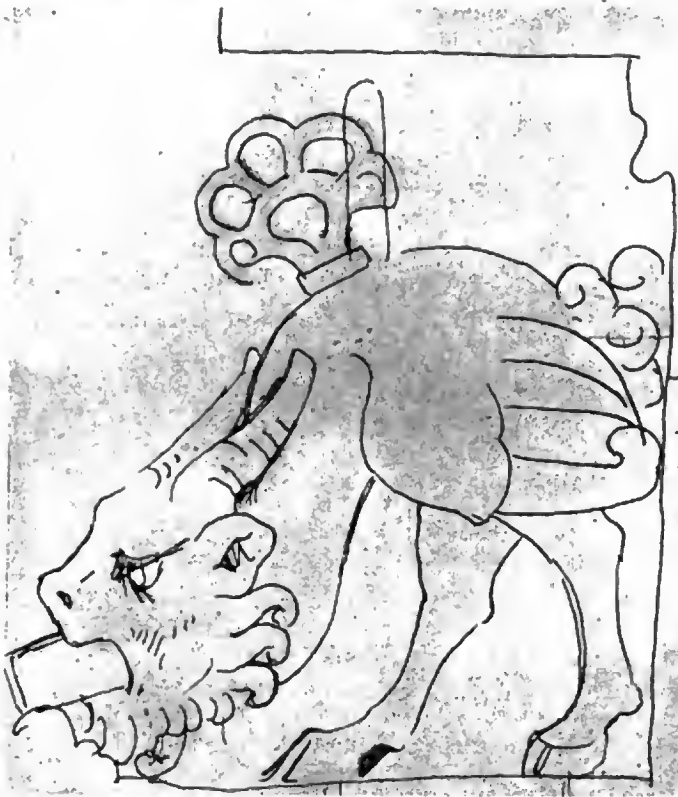
THE ART OF WILLIAM BURGESS, A.R.A.



MANTEL PIECE, DRAWING-ROOM, WILLIAM BURGER'S HOUSE.

are exhibited with representations of parrots and other birds. The windows are separated by piers of Devonshire marble, with arches above, forming deep recesses, in which divans are placed. It was intended that the joints in the piers, which are fairly wide, should be filled with a finer material, stamped with a pattern and then gilt. It was also purposed that the walls of the room up to a height of about 8 ft. should be covered with panelling, painted green and polished, and adorned with paintings of flowers, etc. In the walls are four cupboards or ambries, the doors of which have most highly finished paintings, representing the emblems of the winds, the oceans, also flowers, with fairies just discernible in different positions in each flower. These paintings were by F. Weekes.

The decoration of the room throughout relates to the tender passion of "Love," as viewed by a 18th-century artist. The hooded mantel-piece (p. 133) reaches to the ceiling, and is an heroic representation from the *Roman de la Rose*. In



SIDE ELEVATION OF GROTESQUE TAP TO BASIN, GUEST'S ROOM, WILLIAM BURGESS' HOUSE.

the centre, on a bracket with carved love birds, is a large robed mediæval cupid, draped in a gorgeous gown, with elaborately gilt and coloured wings. Immediately above the chimney-opening are shown heads of the "Enemies" of "Love,"—the expressions being wonderfully depicted—such as "Envy," "Hypocrisy," "Hate," "Sadness," "Poverty," etc. Above, forming a kind of frieze, is the "Garden of Love," shown by trees, full of fruits and flowers, and beneath, disporting in their shade, are the "Friends of Love," such as "Beauty," "Wealth," "Desire," etc. At one side the "Dreamer" is seen entering the gate of the garden, admitted by "Idleness," and on the other side he is plucking the flowers and the fruit. The ceiling, which is divided into coffered panels by beams, has pictures of Cupid in different aspects, "Love the Pilgrim," "Love Triumphant," etc. In the middle lights of the windows, the central stained glass panels show heads of women most

celebrated for their beauty in history (designed by Mr. H. W. Lonsdale), Helen of Troy, Cleopatra, Beatrice, Joan of Arc, Galiana, Eve, Aspasia, Rosamund, Ninon. A deep painted frieze runs round the room, painted by Mr. H. W. Lonsdale, representing the stories of Hero and Leander, Dido and Æneas, Pyramus and Thisbe, Launcelot and Guinevere, Circe turning the followers of Ulysses into swine, and Paulo and Francesca. The various legends are treated as they would have been in the thirteenth century, the heroes and heroines being shown in costumes of that period. In lieu of the highly polished, green panelling as intended by Burges, the late Mr. Pullan had the walls painted up to the frieze, and the drawings of the panels with the flowers and birds fixed to the walls.

Of furniture, there is very little in this room, as Burges died before he had completed the work. There is, however, a beautiful settle, the woodwork of which is of oak, gilt and painted, with red and blue arabesques. There is a very fine piece of Turkish embroidery let in as a panel, with a glazed front,

at the back of the settle. Some panels, containing some finely executed paintings, it is thought by F. Weekes, are in this piece of furniture. No chairs were executed for this room; the intention of Burges was to have a large circular seat—somewhat after the style of the seats painted by the late Alma Tadema, but of wood, gilt, upholstered and decorated in the thirteenth-century style. In the



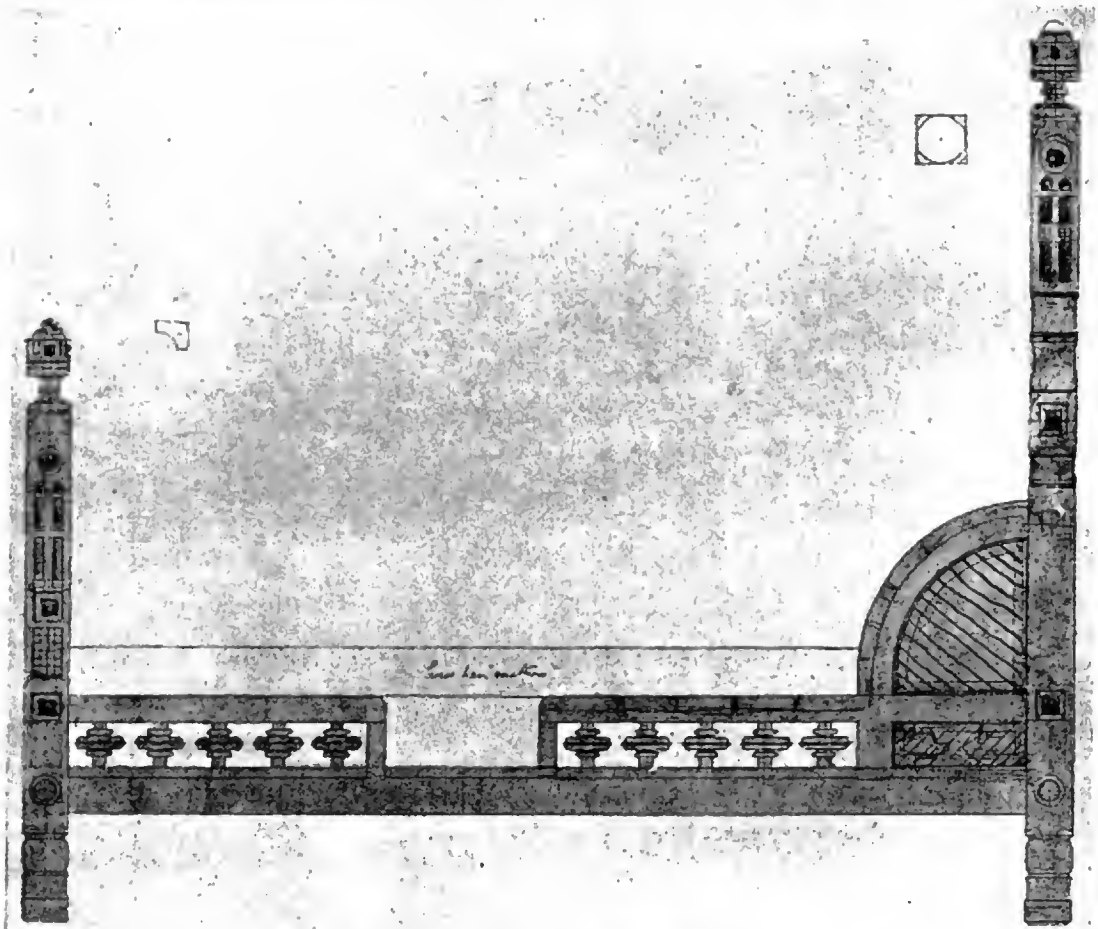
MOSAIC PANEL, PORCH FLOOR, WILLIAM BURGESS' HOUSE.

centre of the seat there would have been a pedestal, on which was to be placed the helmet (still in the house), supported by the two bronze figures, designed by Burges.

The library was the room mostly used by Burges, and may be considered to be complete. It has decorations suitable for its use, and is unique in design. The "hooded" chimney-piece represents the "dispersion of languages," as at the time of the destruction of the Tower of Babel. Nimrod, clothed as a thirteenth-century king, sits enthroned in the top central niche, and "Lady Grammar," issuing from a gateway in the centre of the frieze of the mantel, above the chimney-opening,

is sending the "Parts of Speech" through the world. Two trumpeters represent the "Pronouns"; a queen, whose train is borne by two pages as the "Articles," personates the "Verb"; a porter, as the "Noun" bearing a burden, that of the "Sentence," "Adjective" and "Adverb"; two lovers, arm in arm, the "Conjunction"; and a man, with his arms upraised, the "Interjection." All the figures are painted, and the draperies, in nearly every case, have appropriate diapers, painted and gilded. The lower part of the chimney-piece is of onyx.

The ceiling is divided into eight compartments, containing representations of six founders of law and philosophy, Moses, Mohammed, Aristotle, Justinian, St. Paul and Martin Luther. The stained



GILT BEDSTEAD, GUEST'S ROOM, SIDE ELEVATION.

glass in the windows, from cartoons by F. Weekes, represents painting, architecture, sculpture, etc. The bookcases, painted also by F. Weekes, have on their doors (p. 129) a humorous, alphabetical series of paintings: "A" the architect, Burges; "G" the glazier, Saunders, who carried out most, if not all the stained glass in the house; "P" the painter, F. Weekes. The birds' heads on the inside of the doors were painted by H. S. Marks, R.A. The large bookcase was made for Burges' own use at his office and was exhibited at the 1862 Exhibition. The artists now surviving who helped with the paintings on this piece of furniture are Sir Edward Poynter, P.R.A., Mr. H. Holliday and Mr. N. H. J. Westlake.

The opaque night-blinds on rollers of this room, and also of the dining and drawing rooms, had their interior surface ornamented with *appliqué* work by Fisher. The lighting of this room was by

table lamps, of the old-fashioned colza-oil pattern. The ordinary china or glass case (usually very common and vulgar), for the oil container, was more than Burges could tolerate. "Everything in the house must be artistic!" So he covered the oil containers with a series of 2-in. rims from Japanese *cloisonné* enamel boxes, joined together by bronze rings, thus creating unique and artistic lamps. The elephant inkstand, the design for which is in one of the portfolios of Burges' designs in the Library of the R.I.B.A., is another instance of his "adaptability."

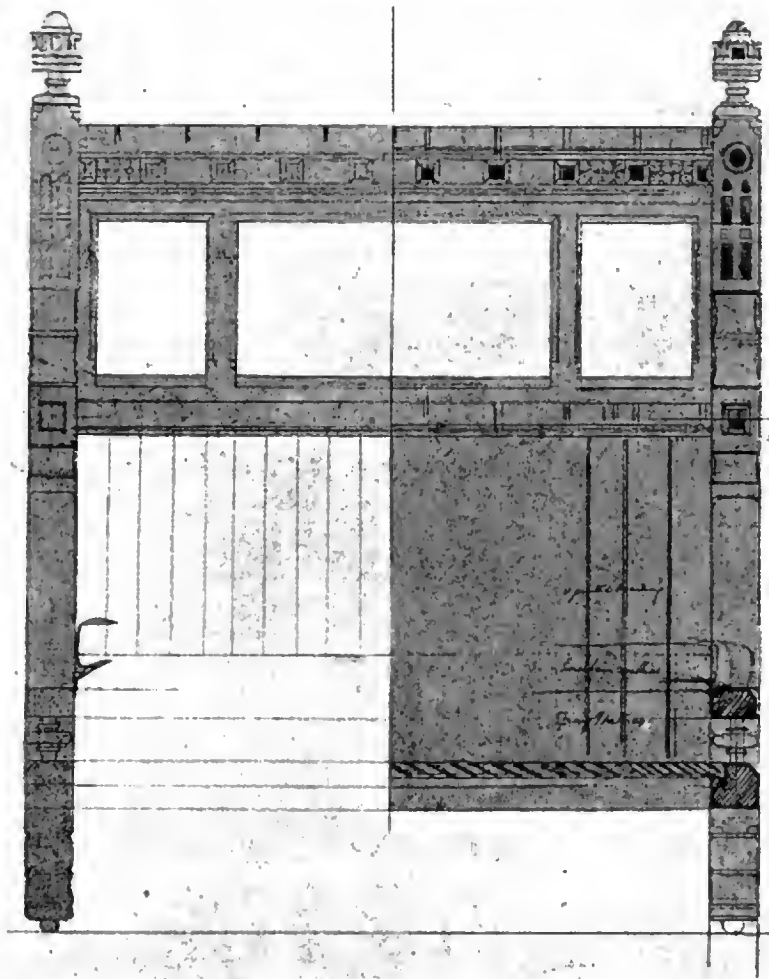
The dining room has its walls lined to about a height of 8 ft. with Devonshire marble, above which is a deep frieze of white glazed tiles, with a playful, painted representation of the Loves and Heroines of Fairy Tales. The figures are all in mediæval costume, and the cartoons were made by Mr. H. W. Lonsdale. They were not fixed until after the death of Burges. On the high marble dado, certain spaces are shown by removable squares, in which it was intended to insert pictures on gold grounds, with metal frames.

The ceiling (p. 132) is divided into coffered compartments by square beams, profusely decorated. The ceiling itself is covered with enamelled iron, on which are richly painted symbols of the sun, the planets, and the signs of the Zodiac.

The hooded chimney-piece is of Devonshire marble, in the centre of which is a bronze figure of "Fame." The face and hands are of ivory, and sapphires are inserted in the eyes. The wings were intended to be enamelled and gilt. The figure is hung on a hook, so that it can be removed.

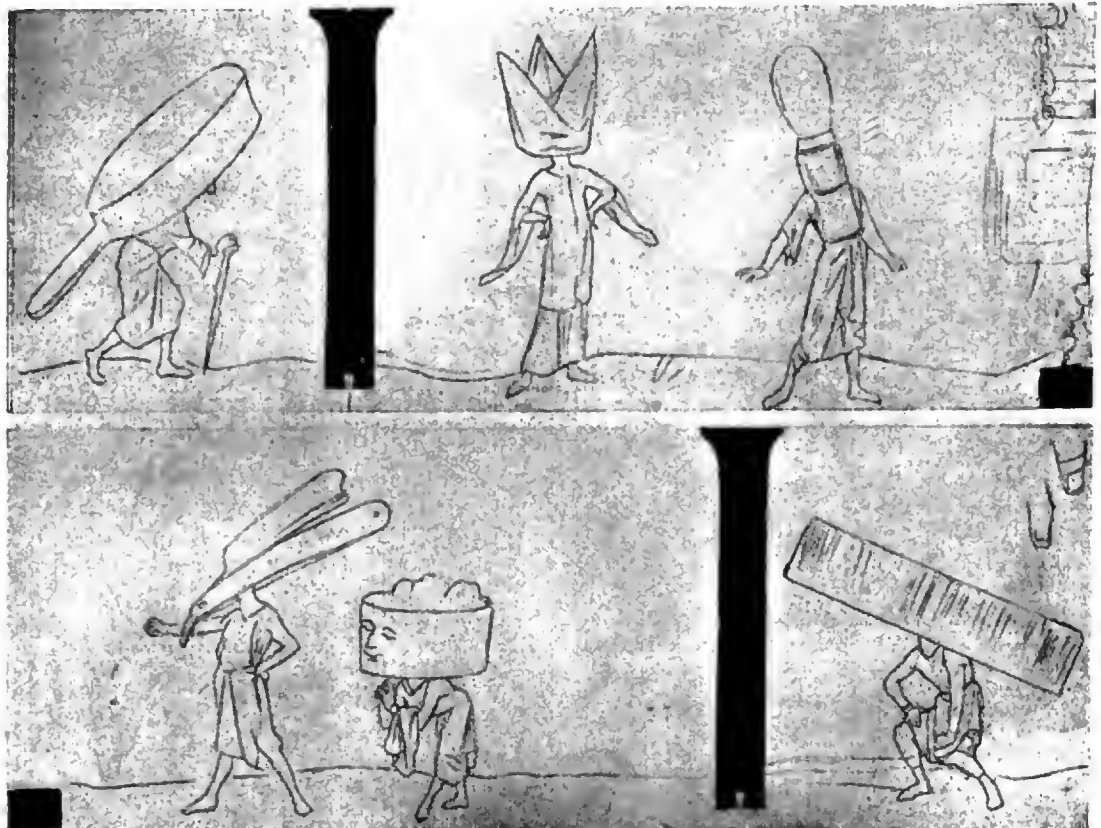
The window seats, with their crystal knobs, are of walnut and were the beginning of the permanent furniture of this room, except the sideboard, the design for which is exhibited. This is formed of oak and is richly gilt and painted. Some of the drawers are lined with marble, and other drawers are fitted with trays, to take the several pieces of silver, forks and spoons, etc., specially designed by Burges. In two large Japanese *cloisonné* enamel circular boxes are silver entrée dishes. Besides these, Burges also designed numerous dishes, flagons (p. 139), decanters, etc., the drawings of two of which are exhibited. They are formed with silver-gilt mounts, and set with *cabochon* garnets, sapphires and other semi-precious stones.

"The Guest's Chamber" is the most gorgeous of the bedrooms, the whole of the furniture being of



GILT BEDSTEAD, GURST'S ROOM, END ELEVATION.

oak, solidly gilded and picked out in colours. Bevelled silver plate-glass is largely made use of in the furniture for linings, sides and underneath portions of shelves, etc. The designs for the bed are exhibited (pp. 136, 137), but they give a very slight idea of what the bed really looks like. Every little sunk-panel is filled either with coloured marble, such as lapis-lazuli or porphyry, or green or red or blue tinsel foil behind glass, or a painting like unto "Missal" work. The painting at the head of the bed is the "Judgment of Paris." The cleverness and thought displayed in the dressing table show the immense amount of labour and consideration Burges expended on almost trifling subjects. The glass, for instance, being on double pivots, can be placed at almost any angle! The table-shelf is formed of very



DECORATION FOR WARDROBE, "MERMAID ROOM," WILLIAM BURGESS' HOUSE.

fine mosaic, in which are inserted plaques of porphyry, lapis-lazuli, verde-antique, giallo-antico, and other semi-precious marbles. The tip-up washing basin, with the detail drawings (pp. 130, 134) of the bronze grotesque tap and ball-valve, together with the silver inlaid fish and butterflies, is extremely interesting.

The designs for the ceiling and frieze of this room are exhibited, the ceiling being divided into panels and profusely decorated with butterflies of different varieties and colour. The design for the frieze is a series of arcades, the different panels being painted with bunches of different kinds of flowers.

Besides the casements to the windows there are (1) Mushbrebeeyeh work lattice shutters, in which are introduced pieces of coloured glass, and (2) solid wood shutters, decorated with paintings.

The mantel-piece (not "hooded") is of red veined marble, on which is a design in gilt lines. Above this is a specially designed solidly gilt overmantel, to take Burges' collection of eastern vases and pots, etc. Considerable effect is gained by the bevelled plate silvered-glass panels to the underneath sides of the shelves, the backs and sides of the overmantel.

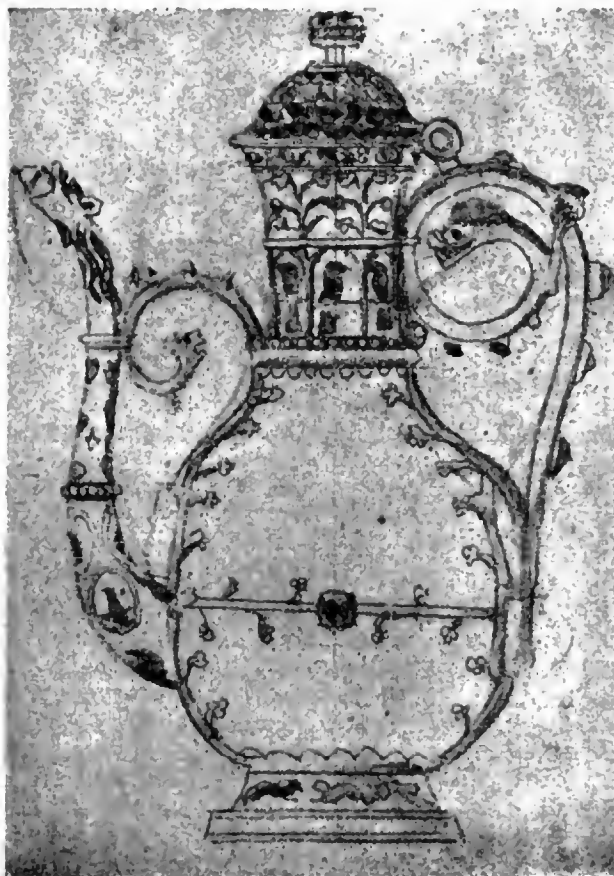
The next bedroom, designs for parts of which are shown, is Burgess' "Own Bedroom," or, as he often called it, "The Mermaid Room," so named from the carved and richly decorated figure of a Mermaid on the "hooded" mantel, where she is seen throwing back her luxuriant hair and holding a mirror. The *motif* of this room is the sea, with the scaly monsters of the mighty deep. In the frieze of the mantel, they are shown gliding amongst the curling billows, the john-dory and the skate being easily discernible, and the "silver-crested" waves being actually decorated with silver; the rest of the panel is painted with delicate greens and blues over silver foil.

The furniture in this room is painted a rich crimson-red and "carriage-panel"-varnished. The "Four Seasons" on the looking glass were painted by Burgess, and the drawing of the procession of the razor, the shaving brush, etc. (p. 138) was made by him for the wardrobe. The picture of the "Sleeping Beauty" at the head of the bed—a very beautiful picture—was painted by H. Holliday. The ceiling is divided by beams into compartments and richly decorated. The intervening spaces were filled with stars, the centres of which are formed with small silver plate-glass mirrors.

The hall, containing a very simple hooded chimney-piece, is carried up the two storeys, being open to the roof. The walls are rather plainly painted, to represent ashlar-work, panels being painted over the doors. There is a dado of marble round the walls to the ground floor. "The Early Bird" and "The Worm" are shown next the Guest's Room door, and figures of the sun and the morning and evening stars are painted on the walls on the first floor. The roof ceiling is painted with red and grey panels, within which are birds, beasts and fishes. The large hall window on the first floor (cartoons by Mr. H. W. Lonsdale) represents winged figures emerging from bells, "Morning," "Noon," and "Twilight." The mosaic floor represents a labyrinth, in the centre panel being depicted a combat between Theseus and the Minotaur.

The garden, at the back of the house, contains two large semi-circular Jura marble seats, facing each other, and placed on a mosaic floor. In the centre there used to be a marble base, with a figure by the sculptor, Mr. Nicholls.

In conclusion, I have to acknowledge my indebtedness to Mrs. Wentworth Watson, Mr. J. S. Chapple, Mr. H. W. Lonsdale, and the articles by the late Mr. Pullan for much information and explanation of many points and details; and I take this opportunity of thanking those who are still with us for their kindness.



CRYSTAL FLACON WITH SILVER-GILT MOUNTS, SET WITH SEMI-PRECIOUS STONES.



9 CONDUIT STREET, LONDON, W., 19th February 1916.

THE ROYAL INSTITUTE AND THE WAR.

By ERNEST NEWTON, A.R.A., *President*.

Those members of the Institute who are accustomed to gauge its activity by the reading and discussion of Papers, General Meetings, and other public evidences of life may be apt to think, in the absence of these usual signs of vigour, that the War has paralysed us and that we are merely marking time until peace shall set us going again. This, however, is far from being the case. Our normal activities have naturally been modified, and in some cases dropped until the end of the War, but our energies have flowed along other channels.

It was evident at the outset that architects were certain to be heavy sufferers from the results of the War, and the R.I.B.A. at once called a meeting representative of the whole architectural profession so that we might be in a position, as an organized body, to offer our services to the Government, to appeal for funds, and to devise means to meet the various difficulties which we saw ahead of us. The Architects' War Committee was accordingly formed and we began to get to work. At first, as the ground was all unfamiliar, there was a certain amount of groping, but compelling circumstances finally gave shape and motion to our machinery. An Executive Committee was created to act for the large and representative War Committee, and two Committees—the Professional Employment Committee and the Selection Committee—were formed to deal with the work in detail. All funds received in response to our appeal, with the exception of 100 guineas subscribed by the Society of Architects for the work of the Professional Employment Committee, were placed in the hands of the Architects' Benevolent Society.

It very soon became evident that we could not cope with the rapidly increasing unemployment problem unless some large scheme of work could be devised, and unless we could draw upon funds much larger than any we could hope to get from those few architects whose practice was still unaffected by the War.

A comprehensive scheme of Civic Survey work was suggested to and adopted by the War Committee, who formed a Civic Survey Committee, representative

of the R.I.B.A., the War Committee, the Surveyors' Institution, the National Housing and Town Planning Council, the Professional Classes' War Relief Council, the Architects' Benevolent Society, the Town Planning Institute, the London Society, and the Garden Cities and Town Planning Association, to consider it. The Civic Survey Committee approved the scheme and asked the Government to authorise and finance it. The Government gave its approval and agreed to finance it through the Architects' Benevolent Society. It thus became, in a sense, a Government scheme which has provided regular employment for some 60 architects. The organization is controlled by the Civic Survey Committee, and the payments are administered by the Architects' Benevolent Society.

The Institute has given its two large Galleries and has been responsible for all the working expenses of the Survey. Up to the present time Civic Surveys have been undertaken for Greater London, South Lancashire, and South Yorkshire.

The Professional Employment Committee has held its meetings on the premises of the Society of Architects, which provides office accommodation and clerical assistance, and this Committee has done a great deal of most useful work in distributing the funds placed at its disposal by the Architects' Benevolent Society as payment in each case for specific work performed by the applicant.

In this way some 400 applications have been dealt with and assistance has been given in a large number of cases, and although a certain proportion of the money expended is repaid to the Architects' Benevolent Society by the Prince of Wales's Fund, it is evident that the activities of this Committee will unfortunately have to be greatly curtailed unless our resources are largely increased by the generosity of those architects whose practices still survive.

The present moment is perhaps hardly a promising one for a further appeal to a much-trying profession, but it is hoped that later in the year it may be possible to obtain further donations for this valuable work.

Fortunately, however, just at the time when unemployment is increasing and our funds are diminishing, openings are being found for architects in certain branches of munitions work, and the need of men, after a short training, competent to undertake this work is so great that we shall only feel called upon in the future to consider the cases of those whose age or some physical disability disqualifies them for work of this character. In this connection a large amount of work has fallen upon the Selection Committee, which has now nearly completed a list of about 1,000 architects willing to undertake some definite branch of War Service. Their names are being forwarded to the proper authorities, and it is hoped that many will be employed.

The Selection Committee has also concerned itself with definitely military work in the organization of Engineer Units and the nomination of men for Engineer commissions.

No stone has been left unturned in our efforts to get architects employed by Government Departments on work which their training and abilities would enable them to perform with great advantage to the country, but, so far, the result has not been commensurate with the effort.

The Architectural Association took charge, from the outset, of the military side. The admirable work that it has done in organizing and training a volunteer corps and a volunteer ambulance detachment, and in working a Recruiting Bureau for various branches of the Forces, is well known to our members.

The foregoing is only a very bald statement of facts, but the results have not been achieved without almost countless meetings, interviews, deputations, reports and letters.

We have, fortunately, on our War Committees men who have been willing to give a very large proportion of their time ever since the beginning of the War in order to realize the two objects that we have in view—namely, to help our country and to make more tolerable the lives of those of our brother architects whom the War has deprived of their livelihood.

ERNEST NEWTON, *President R.I.B.A.*

CHRONICLE.

R.I.B.A. Record of Honour : Twenty-fourth List.

Killed in Action.

WOOD, HENRY : 2nd Lieut., 19th Bn. Royal Fusiliers.
Killed in action, 2nd January 1916.

BLAKE, CHARLES STANLEY : Capt., 10th Bn. Prince of Wales's Volunteers (South Lancashire Regt.).
Killed in action.

Captain Blako was an assistant, 1st class (a), in the Architects' Department of the London County Council.

Died of Wounds.

DAVIDGE, H. E. J. : Corporal, 13th Divisional Signal Co., R.E. Died on 20th January of wounds received in Gallipoli on 12th Sept.

DAVIES, WM. EDWARD : 2nd Lieut., 5th Bn. Cheshire Regiment. Died of wounds in France on 29th January. Aged twenty-five.

WALKER, DENIS H. [*Student*] : Captain, 5th Bn. A.P.W.O. Yorkshire Regt., T.F. Died of wound, received at Ypres, Flanders, 26th January 1916. Aged twenty-six.

Captain Walker was the eldest son and partner of Mr. W. S. Walker [F.], of 77 Lowgate, Hull. He was an enthusiastic student of architecture and showed much talent in his work. He had intended to sit for the Final Examination last year, but was prevented through the mobilisation of his unit in August 1914. He had been for some years in the Territorial Force, was gazetted 2nd Lieutenant in 1906, promoted Lieutenant in 1908, and Captain in October 1914. A man of fine physique, standing nearly 6 feet 4 inches in height, he was very highly esteemed in his battalion and by all who knew him. His only brother is serving in France as 2nd Lieutenant in the same battalion.

Awarded the Military Cross.

JONES, G. HOWARD [A.], 2nd Lieut., 3rd Bn. (attached 2nd) Welsh Regt. Awarded the Military Cross for important work in France.

As Brigade Scout Officer, 2nd Lieut. Howard Jones has discharged difficult observation duties in the front trenches and has submitted invaluable reports and sketches. In company with another officer and two men he has also figured in an exciting wire-cutting episode between the British and German trenches in the neighbourhood of Loos.

Second-Lieut. Howard Jones is the second son of the late Mr. J. P. Jones, architect, of Cardiff, and served his articles with his elder brother, Mr. Ivor Jones [A.], Cardiff, after which he obtained an appointment on the staff of H.M. Office of Works, Storey's Gate, which position he was holding when he joined the Public Schools Battalion on the outbreak of War. In due course he was appointed 2nd Lieutenant of the 3rd Welsh quartered at Cardiff, and in October last proceeded to France, attached to the 2nd Welsh, and received his baptism of fire when the Germans made their counter-attack after the battle of Loos.

Mentioned in Dispatches.

HAMMOND, FRANCIS SNOWDEN [*Licentiate*], Captain, 1/11th Bn., London Regt., Finsbury Rifles.

Mentioned in Sir Ian Hamilton's dispatch for his work at Anzac.

Captain Hammond is the eldest son of Mr. Frederic Hammond [F.], District Surveyor for Hampstead.

Serving with the Forces.

The following is the Twenty-fourth List of Members, Licentiates, and Students R.I.B.A., who have joined the Forces, the total to date being 54 Fellows, 416 Associates, 217 Licentiates, and 267 Students :—

FELLOW.

Tate, J. Duncan : Lieut., 22nd Bn. London Regt.

ASSOCIATES.

Box, C. W. : 2nd Lieut., 3/1st E.A. Field Co., R.E.
Carnelley, Herbert : Engineers' School, Artists' Rifles, O.T.C.
Cooper, A. : Headquarters Signal Co., 10th Corps, France.
Francis, G. E. : Lance-Corp., 149th Army Troops Co., R.E.
Friskin, Wm. : Royal Horse Artillery.
Gage, Chas. H. : 2nd Lieut., Royal Engineers.
Heaven, Frank H. : Sapper, 2/1st Glamorgan Field Co., R.E.
Henderson, A. G. : 2nd Lieut., 9th Highland Light Infantry.
Jones, C. Montagu : R.N.A.S.
Leith, Gordon : Gunner, Royal Horse Artillery.
Ludlow, W. H. : 2nd Lieut., Royal Engineers.
Matthews, Harold Ewart : Major, Headquarters Staff, London.
Nicholson, Fred W. : 2nd Lieut., Lanes (Fortress) R.E.
Prince, H. : 2nd Lieut., Royal Welsh Fusiliers.
Rollo, Andrew : Sapper, 1st Provisional Field Co., R.E. (T.).
Trench, G. Mackenzie : 2nd Lieut., 3rd Bn. Argyll and Sutherland Highlanders.

LICENTIATES.

Conway, E. J. : Inns of Court O.T.C.
Durst, Austin : 2nd Lieut., Kent (Fortress) R.E.
Evill, Norman : Lieut., Army Service Corps.
Hodgson, Victor T. : Lieut., R.N.V.R., King's Messenger.
Kay, C. J. : B Co., Army Service Corps, M.T.
Porter, Bernard A. : Artists' Rifles, O.T.C.
Twist, W. Norman : Artists' Rifles, Pioneers' Class, O.T.C.

STUDENTS.

Harwood, Arnold W. : 2nd Lieut., 4th Bn. Royal Warwicks.
Macmillan, A. L. : Private, 3rd Bn. Gordon Highlanders.

Promotions.

Major Sydney White Cranfield [J.], to Lieut.-Colonel commanding 3/7th Bn. Middlesex Regt. (T.F.).

Lieut. C. Orlando Law, R.E. [*Licentiate*], to Captain R.E. Corp. J. S. Thomson [*Student*], formerly London Scottish, to 2nd Lieut., Royal Field Artillery.

2nd Lieut. Alec Smithers [*Associate*], to Lieut., 154th (Hants) Heavy Battery R.A.

Mr. W. V. Lawton [*Student*], formerly Yorkshire Dragoons, to 2nd Lieut., R.E.

Lieut. W. Milburn, jun. [*Associate*], to Captain, 1/3rd Northumbrian Brigade, R.F.A.

Mr. Stanley W. Milburn [*Associate*], to Lieut., 1/3rd Northumbrian Brigade, R.F.A.

Mr. Edward Warren's Appointment at Corfu.

Mr. Edward Warren, F.S.A. [F.], has been appointed Administrator of the British Hospital which the Serbian Relief Fund have established at Corfu. This is the seventh hospital organised by the Fund, the French and Serbian authorities at Corfu having intimated by telegram that they would welcome the establishment of a British hospital there. Mr. Warren, with an advance party of the hospital staff, left London for Corfu last week.

Additions to the Institute Collection of Drawings.

Pending publication of the usual Library lists, some brief details may be useful of the drawings lately added to the Institute Collection which form the subject of Mr. Halsey Ricardo's article in the present issue. Those of the late Norman Shaw are representative of his work at various periods, including his chief domestic, ecclesiastical, and public buildings. The collection contains, for example, drawings of New Zealand Chambers; the Clock House, Chelsea; St. John's Church, Leeds; Wispers, Cragside, Lowther Lodge, Chesters, New Scotland Yard, with various sheets of the Regent Quadrant Scheme. There are also two sketch-books and several sheets of loose drawings. Nesfield's drawings include among others his designs for a farmhouse and cottages at Crewe Hall, a house at Babbacombe, and an entrance lodge for Crichel. George Edmund Street is represented by drawings of St. Paul's Church at Rome, and Paddington Church, London. In addition to the very interesting collection of designs by William Burges for his own house in Melbury Road, described in Mr. Briggs' article in the present issue, there are drawings by Burges relating to Castell Coch, and the stables carried out for the Marquis of Bute at Cardiff Castle. With these sheets are a number of illustrations of Burges' work collected from the architectural journals. The collection includes also a number of drawings by Philip Webb, presented (through Mr. Halsey Ricardo) by Mr. Emery Walker and Mr. C. C. Winnill. Among them are his designs for the enlargement of Val Prinsep's house (No. 1 Holland Park Road), a house at Caterham in Surrey, No. 19 Lincoln's Inn Fields, and a sheet of various details of Brampton Church, Cumberland, sketched in pencil, with photo-prints of the sectional and elevational drawings.

ROBERT WATSON, 1865-1916.

I WAS for more than five-and-twenty years in partnership with Robert Watson. We joined forces together when first we set up independent practice, and happier relations never existed between any two men than between us during all that time. The years slip away; the chapters of our life are finished one by one; we may never know our happiness until it is past. Watson and I were more fortunate in knowing it all the time; with but one cloud to mar it, rising during the last few years—the sense of a coming inevitable end to our companionship.

A charming manner may be acquired by study. But Robert Watson had an unstudied natural charm of manner that made friends at once and wherever he went, with master and man. Patient, gentle and good—even through a long and severe illness these shone undimmed—his gentleness disarmed opposition. An unworthy expression never fell from his lips, because an unworthy thought never formed in his mind. He was one of the true friends spoken of by Bacon, "to whom you may impart griefs, joys, fears, hopes, suspicions, counsels, and whatsoever lieth upon the heart to oppress it."

He often spoke of his early life in Edinburgh and Glasgow. Born in 1865, he was educated at Edinburgh Institution, Dr. Ferguson being then Headmaster. He was a keen football player, and became a member of the Edinburgh Institution former pupils' first fifteen, and played against the principal Scots teams. It was first proposed that he should be an engineer. As he told me, standing up inside a boiler, holding up rivets, while his feet were in icy water, on a cold winter's morning before daybreak—his first introduction to engineering—was little to his taste. Abandoning that, he entered first the office of Mr. Paterson of Edinburgh, and later transferred to that of Mr. Hippolyte J. Blanc, in Edinburgh, with whom he remained a few years. Some drawings, made in his holidays, of Dunblane Cathedral, brought him a post as assistant in the offices of Mr. Hew Wardrop and Dr. (now Sir) Rowand Anderson. He always spoke with warm regard and admiration of those gentlemen and of the work he saw and helped in while on their staff.

Proposing to emigrate to Canada, he came to London in the 'eighties, intending to stay but a short time before sailing. He found employment on the Exhibition buildings at Earl's Court, and afterwards with various architects, gradually abandoning his idea of emigration.*

It was at this time I first met him, when we both were in the ranks of the assistants. We were thrown a good deal together, as we both were employed in assisting Mr. James MacLaren, and on Mr. MacLaren's

* He passed the qualifying examination and was elected Associate of the Institute in 1888, and proceeded to the Fellowship in 1904.

death in 1890 circumstances arose which led us to carry on together what there was of that gentleman's practice. A few years later we entered into a full partnership, only severed by Watson's death at the early age of fifty. We were young enough to be adaptable to the ways of each other; we held fundamentally the same views on all important subjects; neither of us was possessed of that strong desire for personal recognition which so often breaks up a partnership in anything artistic. For many years we worked side by side in the same room, on the same works, sometimes on the same drawings; and though we were thus so constantly together, I would have wished no other companion for leisure or holiday hours than he in whose society I spent all my working time.

He had in his younger days a love of music; he had a pleasing voice, delighting in singing the songs of the North, playing his own accompaniments. No more blithe comrade ever went on a holiday: never boisterous, he had the happiest and most cheerful temperament; never ruffled, taking hopeful views of everything. It may be said with perfect truth that he was a universal favourite and had no enemy.

What Ruskin wrote of Giotto might be applied to Robert Watson's life's work as an architect, with but little variation, reading for *paint* and *painted*, *build* and *built*.

"He was a *lavoratore* or labourer, a man who knew his business and produced certain works of known value for a known price; being troubled with no philosophical abstractions, shutting himself up in no wise for the reception of inspirations; receiving, indeed, a good many, as a matter of course—just as he received the sunbeams which came in at his window, the light which he worked by; in either case without musing about it, or much concerning himself as to the nature of it. Not troubled by critics either; satisfied that his work was well done, and that people would find it out to be well done; but not vain of it, nor more profoundly vexed at its being found fault with than a good saddler would be by someone's saying his last saddle was uneasy in the seat. Not, on the whole, much molested by critics, but generally understood by the men of sense, his neighbours and friends, and permitted to have his own way with the walls he had to paint, as being, on the whole, an authority about walls: receiving at the same time a good deal of daily encouragement and comfort in the simple admiration of the populace, and in the general sense of having done good, and painted what no man could look upon without being the better for it."

He had little sympathy with that school of architecture which strives for an original style, or originality above all things; little sympathy with that which finds satisfaction in the production of beautiful work by ignoring present-day requirements.

He rather held that more originality may be shown in giving fresh interest to a well-known theme than in discovering a new one; that the greatest architects the world has seen have been content to retouch and to exalt the creations of their predecessors. Our task is to take the present and find our ideal in it, not dis-

regarding even the vulgar material commercial requirements of our buildings, but fairly accepting these as conditions, to give them artistic expression. A great architecture was never the creation of one man but of many. It may seem that no bold mark on contemporary architecture was made.

And yet,
Think not the living years forget:
Ages of heroes fought and fell
That Homer, in the end, might tell:
O'er grovelling generations past,
The Doric column rose at last.
A thousand hearts on thousand years
Had wasted labour, hopes and fears,
Knells, laughter and unmeaning tears,
Ere England Shakspeare saw, or Rome
The pure perfection of her dome.
Others, I doubt not, if not we,
The issue of our toils shall see;
Young children gather, as their own,
The harvest that the dead have sown—
The dead, forgotten and unknown.

This was the spirit in which he worked, careless of recognition, content in doing what he felt to be good, honest, sound work, in doing the day's work well.

It was always a joy to me to see him at work on a drawing; his drawings were models of what architectural drawings should be. Clear and logical, every line had a meaning, and had its proper importance so that the whole could be read easily. His sketches of old buildings were mostly drawn to scale in his books in the field, in a manner which many could not do with all the appliances and comforts of an office at hand. His drawings of carving were particularly charming. In all there was the hand of the artist, as the mind of the artist could be seen in the choice of subject.

Let it not be thought, however, that his talents and interests were not equally employed in the arts of construction or the details of modern work. He did not leave the details of construction to be settled by the quantity surveyor or the foreman, being persuaded that architecture of which the outward show comes from one mind, while another is employed on the framework which makes it possible, cannot be entirely satisfactory. The labour of designing and drawing out details of drainage, plumbing or hot water schemes was in his mind a labour of love which could be made artistic by the spirit in which it was done and the skill and invention bestowed on it. Few architects had the same knowledge of these practical things; and fewer still the same power of attending to the most minute details of his work.

Of his work as an architect I cannot speak, as, with the exception of one or two very small unimportant things at the commencement of our careers, our works were done in partnership. But this I would say, that if there be any merit in them, to his hand or to his kindly criticism I would ascribe it. We were without friends or influence when we started, and his personality and ability had a full share in our success. The work was very varied in character, as may be

seen from the few out of many mentioned below ; in all of it we could look back to joint labours, successes, failures, but throughout the never-failing spirit of sterling friendship.

All of the many who have passed through our office as assistants must have carried away with them the impression of a character as lovable as it was strong. They will regret his early death ; to me who, during the best years of life, was in closer union with him, in which each rested on the loyal affection, the ready sympathy and help of the other, the loss is irretrievable.

WILLIAM DUNN [F.].

SOME WORKS OF MESSRS. DUNN & WATSON.

Restorations and Additions to Old Buildings.—Glenlyon House, Perthshire ; Scalpay House, Skye ; Floore House, Lifford Hall, Pittsford Hall, Barnwell Castle, Northants ; Shottesbrooke Park, Berks ; Ashfold, Surrey ; Cokethorpe, Oxon. ; Waddington Old Hall, Lancs.

Ecclesiastical Buildings.—Restoration of the Choir, Dunkeld Cathedral ; Altars, pulpits, screens or organs, &c., in Abchurch Church ; Shottesbrooke Church ; New Church at Fortingall.

Hotels.—Mount Nelson, Cape Town ; Fortingall Hotel.

Banks.—Union of London and Smiths Banks in Hull and Barnsley ; British Bank of South America in Moorgate Street.

Insurance Offices.—Scottish Provident Institution, Lombard Street and Pall Mall ; Edinburgh Life Office, Birchin Lane ; Scottish Widows' Fund, Bristol ; Scottish Widows' Fund, Cornhill.

New Houses and Cottages.—Goldhill, Farnham ; Oldhouse Fulmer ; house at Maidenhead ; house at Halseybury ; Hazelbech, Northants ; house at Overstrand.

Miscellaneous.—Water tower at Arad in Hungary ; saloons of Castle Line ships ; cork factory in Leith ; Marconi Company's factory and offices, Chelmsford ; farm buildings in Scotland ; St. John's Institute, Walworth ; blocks of offices in Cape Town, Durban and East London ; blocks of flats at Chelsea.

Books Received.

Antiquities of Ionia. Published by the Society of Dilettanti. Part the Fifth, being a Supplement to Part III. La. 8vo. Lond. 1915. £4 4s. net. [Macmillan & Co., Ltd., St. Martin's Street, London.]

Construction, Equipment, and Management of a General Hospital. By Donald J. Mackintosh, M.V.O., M.B., LL.D., Medical Superintendent, Western Infirmary, Glasgow. Second edit. Roy. 8s. Edin. and Lond. 1914. 15s. net. [William Hodge & Co.]

Commission of Conservation, Canada: Report of the Sixth Annual Meeting, held at Ottawa, 19th-20th January, 1915. [Bryant Press, Ltd., Toronto.]

Civic Improvement League for Canada: Report of Preliminary Conference held under the auspices of the Commission of Conservation at Ottawa, 19th November, 1915. Pamph. Ottawa, 1916. [Mortimer Co., Ltd., Ottawa.]

Commission of Conservation, Ottawa: Town Planning Branch. Draft Act with respect to Planning and Regulating the Use and Development of Land for Building Purposes in Cities, Towns, and Rural Municipalities. With Introduction by Thomas Adams. Revised Edition, 1915.

ASSISTANT ARCHITECT (preferably A.R.I.B.A.) wanted for a firm of architects in Canton and Hongkong. Age about 27 or 28 (ineligible for the Army) ; of good appearance, capable and practical ; able to manage an office alone and to carry out work with little supervision. Three years' engagement. Salary for the first year 250 dollars (Hongkong) per month ; second year, 275 dollars per month ; third year, 300 dollars per month. First-class passage out paid. Apply, by letter, to Mr. Joseph F. Walsh, 10 Harrison Road, Halifax.

NOTICES.

For the future, General Meetings of the Institute will take place at FOUR O'CLOCK P.M., instead of at Three as announced in the Kalendar.

A SPECIAL GENERAL MEETING will be held Monday, 28th February 1916, when the Chair will be taken at FOUR O'CLOCK P.M. precisely, for the following purpose :—

To elect the ROYAL GOLD MEDALLIST for the current year. The Chairman to move : "That, subject to His Majesty's gracious sanction, the Royal Gold Medal for the promotion of architecture be presented this year to Sir ROBERT ROWAND ANDERSON, LL.D., F.R.S.E. [F.], in recognition of the merit of his executed work, his services to architectural education, and his high character and lofty ideals in the art of architecture."

A GENERAL MEETING (BUSINESS) will be held at the conclusion of the Special Meeting above announced, for the following purposes :—

To read the Minutes of the General Meeting (Ordinary) held Monday, 31st January 1916.

To proceed with the election of the following candidates for membership :—

AS FELLOWS.

FAIRWEATHER : JOHN [Associate, 1894] ; 136 Wellington Street, Glasgow ; and Glengarry, Stepps, near Glasgow.

Proposers : James M. Monro, John Watson, W. G. Rowan.

GLANFIELD : ERNEST BUDGE [Associate, 1911] ; 72 Oxford Street, W. ; and 12 Shalimar Gardens, Acton, W.

Proposers : Horace Field, John Slater, George Elkington.

HINDE : EDWARD PERCY [Associate, 1888], President, Liverpool Architectural Society ; 9 North John Street, Liverpool ; and 15 Inglemere Road, Rock Ferry, Birkenhead.

Proposers : Hastwell Grayson, W. E. Willink, Henry Hartley.

WATKINS : HARRY GARNHAM [Associate, 1895] ; Prudential Buildings, and 14 Newstead Grove, Nottingham.

Proposers : Robert Evans, Henry V. Ashley, Albert N. Bromley.

AS ASSOCIATE.

WARDROP : JAMES HASTIE [Special Examination, June 1915] ; Middle Street, Arcot Vale, Melbourne, Australia ; and 8 Mecklenburgh Street, London, W.C.

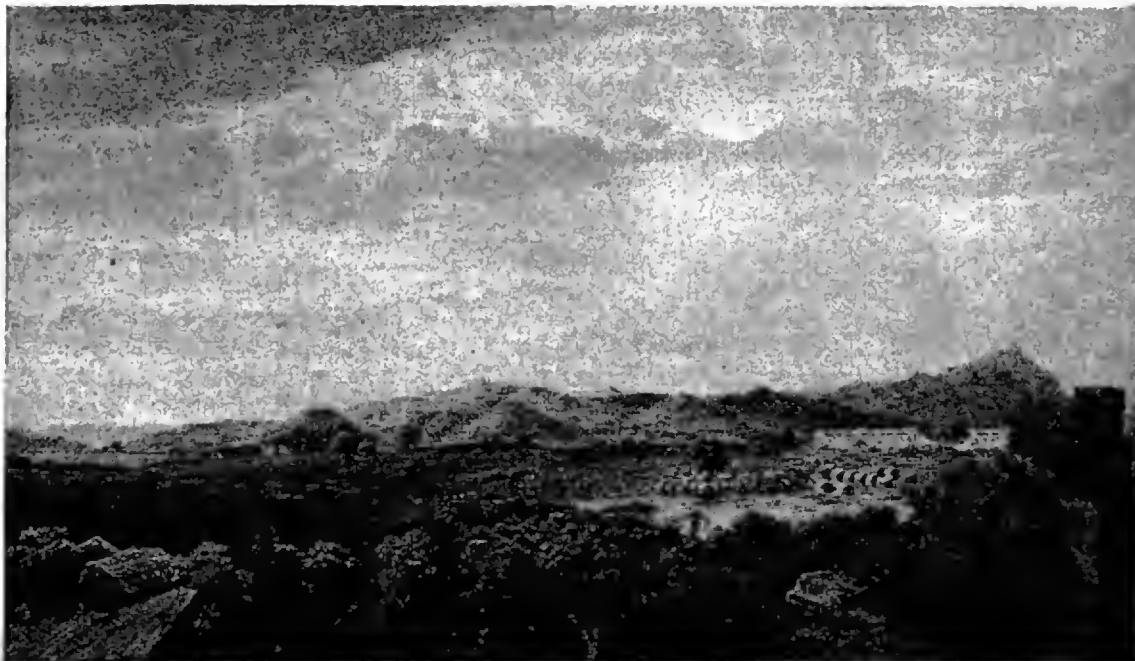
Proposers : L. Stanley Crosbie, Arthur J. Davis, A. R. Jemmett.

On View in the West Gallery.

Designs and Drawings by the late W. Burges, A.R.A., for his house in Melbury Road and the Decoration, Fittings and Furniture.

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MAGNESIA.

From a Drawing in the Institute Collection.

THE SOCIETY OF DILETTANTI'S "ANTIQUITIES OF IONIA."

[*Antiquities of Ionia. Part V. (being a Supplement to Part III.).* La. fo. Lond. 1915. 4l. 4s. net. Macmillan & Co., Ltd., St. Martin's Street, Strand.]

THE Society of Dilettanti, which happily still exists, is to be warmly congratulated on the publication of this fine volume, which completes the issue of the results of its earlier activities. The material now published is practically all architectural, and the Society—as well as the Institute, which contributed handsomely towards the expenses—must be gratified that the services of Professor W. R. Lethaby were secured as Editor.

The last work of this kind that appeared in England, for which, in the first instance, the Society of Dilettanti were also responsible, was the 2nd edition of Penrose's monumental *Principles of Athenian Architecture*, published in 1881. Penrose, however, made a departure from former methods of architectural portrayal in his rendering of actual fact by pure line, and to attain his purpose he employed isometric-perspective methods of delineation, as well as the time-honoured plan and elevation.

In the work now before us we see the "old hand," the cunning of the copperplate engraver, now an almost disused art, but one which is associated with the greatest traditions of architectural research in this country. We have reason to be immensely proud of our past-time scholarship, of the work of such men as Stuart, Cockerell, Donaldson, Pennethorne, Inwood, Newton, Pullan, and Penrose, the results of whose labours are seen in fine folios which are famous the world over. Any publication such as the present one, which calls the attention of the student anew to the value of their work, is of much more than ordinary importance.

The book is no mere collection of plates with attendant descriptions, valuable though many of these plates are. It is a careful record of all the work that the Society has done, and an examination of the Ionian part of it in the light of more recent researches. It is characteristic of Professor Lethaby's method that he rarely, if ever, dogmatizes. With a knowledge of the subject that is of the widest range,

he consistently maintains the impression that he is only a learner. Delving into the many records, both British and foreign, of buildings that once were perfect, but now, alas! are, for the most part, mere fragments, he does not presume to do more than sift evidence, record confirmed facts, and (though this but rarely) give us some synthetic results of his own. If such a method is, at times, bound to be a little disappointing, one has to admit its wisdom, just as one admires, more and more, the pertinacity and acumen of these continued researches in the field of Greek architecture.*

The contents of the volume are really divisible into two sections, though these are, actually, inter-mixed. The first deals with the publication of the 45 plates which form the new material, and consists of three chapters—"The Temple of Artemis at Magnesia and the Ionic Order"; "Myra and Lycian Sculpture"; and "Lycian Tombs: Lindus and Cnidus." The second section deals, in two chapters respectively, with "The First and Second Ionian Missions of the Society of Dilettanti" and "The Third Ionian Mission: Priene, Teos, and the Smintheum." There is, in addition, a valuable Appendix dealing with "Later Hellenistic Architecture and Rome."

The sub-titles to the chapters on Magnesia and Myra are important, as they give the Editor the opportunity of discussing the Ionic Order in the one case, and Lycian sculpture in the other, in a general way; but there is a great deal of valuable information about the Ionic Order in Asia Minor throughout the book; in fact, Professor Lethaby here summarises the results of his latest researches in the measurements of all the known buildings of importance in Greek Asia Minor. It is, throughout, admirable, though the student must be prepared to find it a mass of examination into previous researches and previously ascertained facts. However, this is Professor Lethaby's method, to be taken with thankfulness as one finds it. I am not sure that it is not an inseparable part of his whole outlook on Greek architecture.

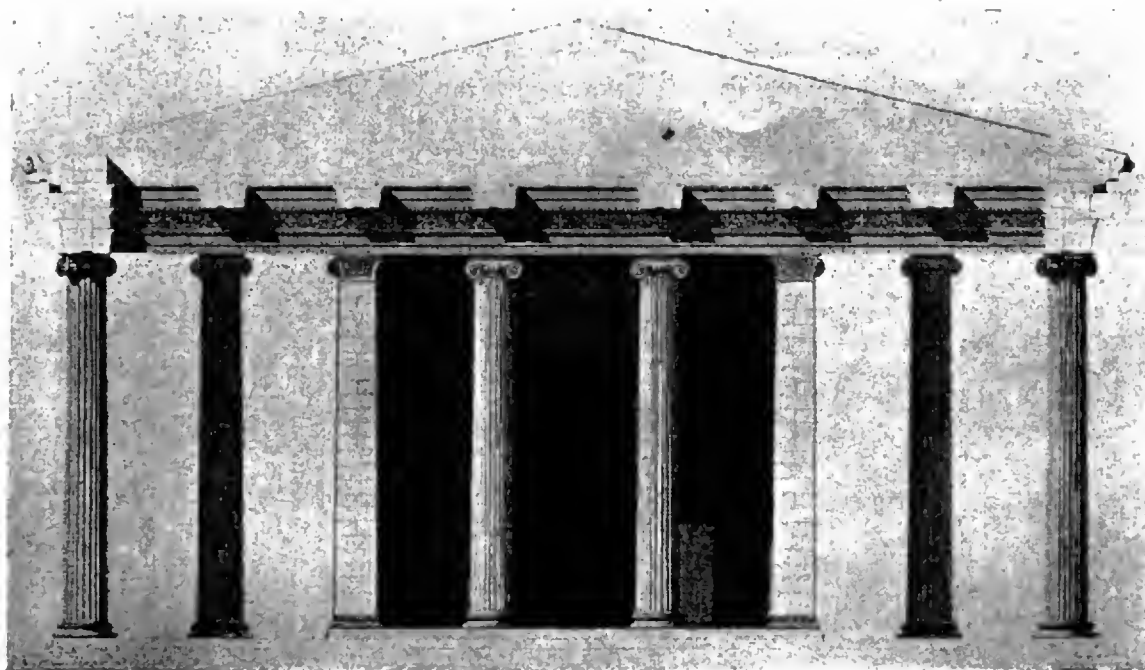
As is truly pointed out in the book, the Temple of Artemis at Magnesia is not a work of first-class importance in comparison with Ephesus, Priene, Sardis, and the Mausoleum, not to mention other Asian examples. One sees this in some of the details illustrated: for example, the abacus of the capital has a fillet above its ogee moulding, a sign of late work; the section of the face of the capital is poor in comparison with that of, say, the Mausoleum; and the base of the column, though it marks an interesting stage of transition, is not quite convincing. The most interesting fact about the temple is, perhaps, the clear evidence of a return to a frieze in the entablature. This frieze was covered with relief sculpture, though it is remarked that the quality of it is poor. Dentils exist in the cornice, as at Ephesus, Priene, etc.

Time does not permit much reference to the remainder of the book in any detail, but one or two things should be noted. First, the great number and variety of tombs (both rock-cut and free-standing) of the so-called "Lycian" type, in which abundant evidence of wood prototype is found†; secondly, the important rock-cut tomb at Lindus, in Cyprus, with its long columned façade; thirdly, some very interesting plates illustrating buildings with a pseudo-Corinthian Order. With regard to all the plates in the book, it must, of course, be borne in mind that a great deal of the material represented has been overhauled by subsequent research; but in noting this fact the Editor usefully points out that the earlier records, in many cases, show the work in a more complete state of preservation. A most valuable feature of the letterpress throughout is its exhaustive statement of what has been done, in the case of each example, up to the present day.

One of the most important things in the whole book might very readily be missed, but anyone at all familiar with Professor Lethaby's Greek studies will realise that it marks the ultimate point to which he has carried his synthetic conclusions. This is the modest half-page or so at the end of the fifth chapter, headed "Ionic Proportions." In it there is practically an announcement of the discovery of a standard rule for the columniation of Asian temples, in relation to column diameters on the one hand and plinth

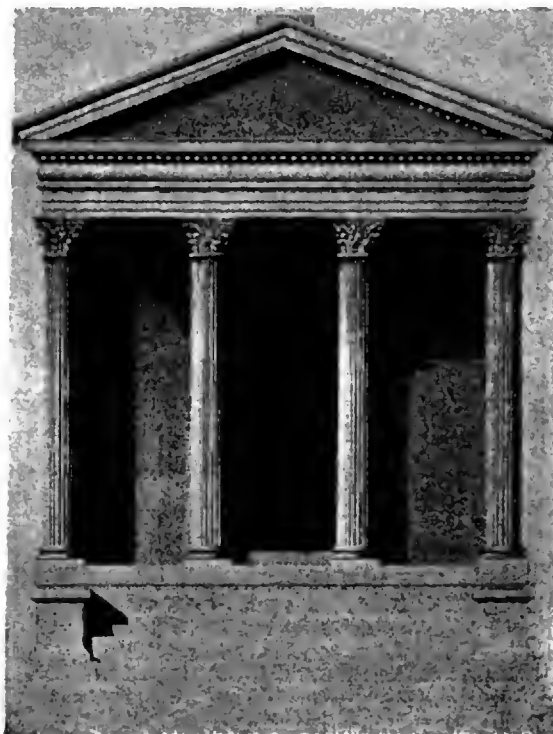
* See also "The Nereid Monument Re-examined." By W. R. Lethaby. *Journal of Hellenic Studies*. Vol. XXV. Part II.-1915.

† In the very fine example shown on page 148, one sees a meeting of Greek spirit with that of Japanese; both doubtless (the Greek, certainly) evolved from distinct and clearly-evidenced prototypes, but quite emancipated from the primitive.



TEMPLE OF ARTEMIS AT MAGNESIA.

Cross Section through Pronaos. From a Drawing in the Institute Collection.

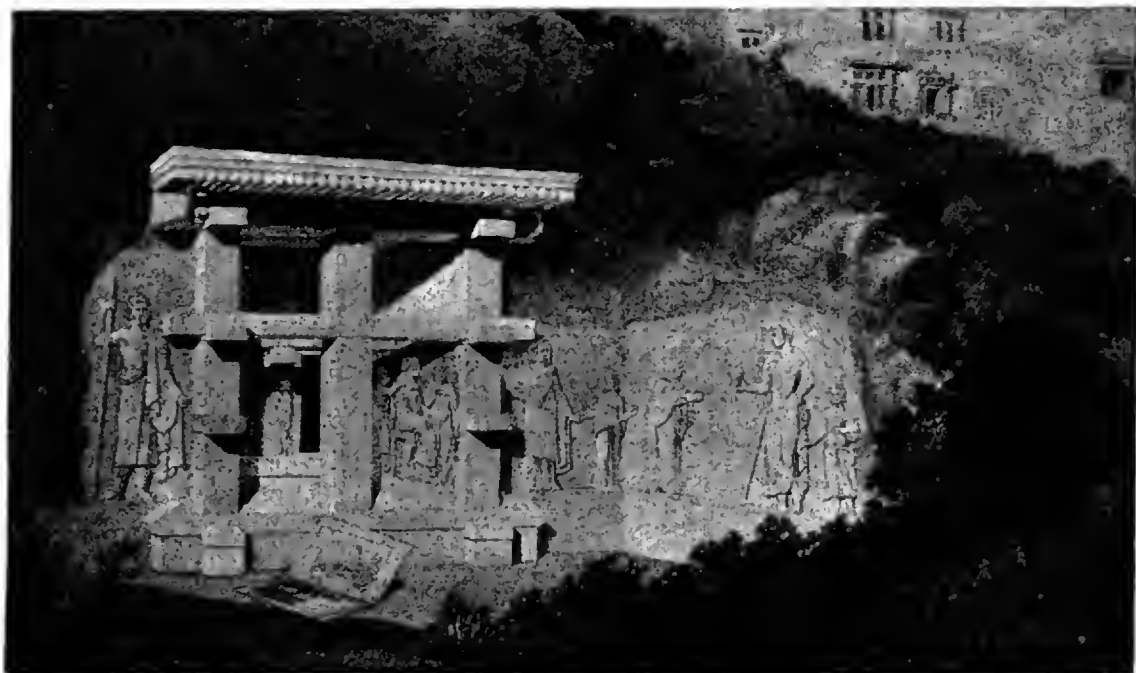


SEPULCHRE NEAR MYRA.

From Drawings in the Institute Collection.

widths (of columns) on the other. One need not enlarge on this here, but it permits us to hope that some day Professor Lethaby will turn from his valuable cross-examining methods for a little and give us the benefit of his actual conclusions on the results at further length. One can readily see, however, that he is distinctly cautious where mere theory is concerned.

The whole classical field is admittedly full of an immense amount of interesting matter. How suggestive, for example, is the four-columned façade of the Corinthian Order illustrated in Plate XXVII. in comparison with, say, the little inner porch of the North Transept of St. Paul's, erected in 1723. Both are, in effect, tetrastyle porticoes slightly pedestalled up, and, all detail apart, have an extraordinary common bond in the rather wide general proportions of their respective Corinthian Orders. One instinctively sets the problem to oneself: Given a Corinthian Order fulfilling such and such a function,



TOMB AT MYRA.

From a Water-colour Drawing by Paul Gandy in the Institute Collection.

in what manner is the result most successful? To answer questions like these we must *know* more about what has been done, know the intercolumniation, height of columns in relation to their diameter, diminution of columns, manner and value of entasis, proportions of capital and base, relative weight of the parts and the whole of entablatures, in all sorts of buildings that are worthy of attention—buildings such as St. Paul's Cathedral; Inigo Jones's little masterpiece, St. Paul's, Covent Garden; and many others. It is no small part of the debt that we owe to Professor Lethaby that he gives us such study and that his outlook in giving it is always *alive*.

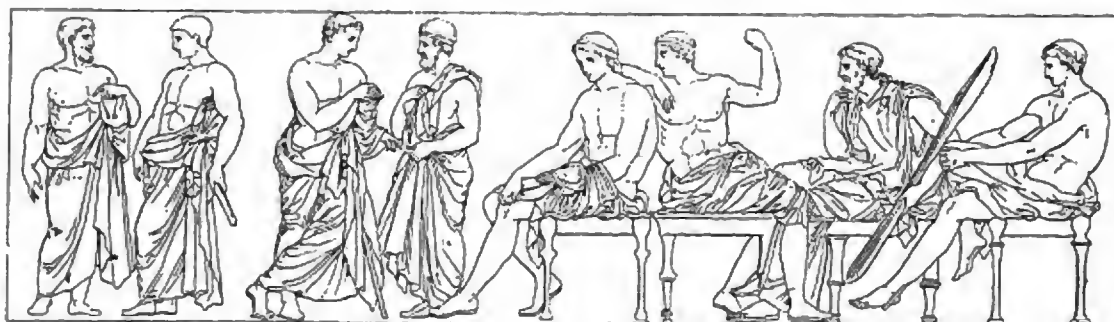
At the close of his Introduction Professor Lethaby expresses the pious hope that the Society may yet again take up active research. May one express another hope, that it devotes attention not only, perhaps not so much to the acquisition of fresh material as to the elucidation of what we already have in this country. Of the matchless collection of fragments in the British Museum only the remains of the archaic Temple at Ephesus have been worthily published. The Second Ephesus Temple, the Mausoleum, and many scattered fragments, remain. Herein lies a field for the Society—nay, why not for the Institute as well?—in co-operation with the Trustees.

The get-up of the book is delightful. Print and paper alike are excellent, while the cover is simple and workmanlike. It must have been a labour of love to Mr. George Macmillan, who, along with Lord Welby, is one of the most active members of the existing Society, and largely responsible for the production of the book. The exquisite vignette on the title-page is carefully described, but one might venture to suggest that some of the other vignettes (such as that on page 84) could be indexed if not similarly described. There is a slight error in the list of the Plates. No. XXIX. should be described as "A Sarcophagus," and No. XXX. as "Detail of the Order of the Tomb shown on Plates XXVII. and XXVIII." The frontispiece and Plate I., two very beautiful copper-plates representing views of the site of Magnesia, certainly deserve particular mention.

In conclusion, the Institute should consider itself fortunate in the possession of a considerable number of the original drawings* from which the plates in this book were prepared. These, as the Editor reminds us in his Introduction, were presented by the Society of Dilettanti in 1912, together with a set of the engraved plates, and it was really this presentation which led to the inquiry (for which we have to thank Professor Lethaby very largely) resulting in the publication.

THEODORE FYFE [F.].

* Made by members of the Second Ionian Mission, sent out by the Society of Dilettanti in 1811. The illustrations accompanying the present article are reproduced from the drawings, not the plates.



THE GREEK SECTION OF CHOISY'S HISTORY OF ARCHITECTURE.

THE two volumes of Choisy's *Histoire de l'Architecture* are written with such exceptional lucidity and conciseness, and contain so much information, that they form an invaluable reference for all interested in the synthetic study of the history of architecture, and it is regrettable that no English translation has yet been published of this monumental work. The explanations given and theories suggested by Choisy may not satisfy every reader, but their value as an exercise for the reflective faculties must be generally admitted. The section on Greek architecture, which fills 246 large octavo pages of the first volume, is of special interest. Choisy spent a considerable time in Greece, studying at first hand ancient architectural construction from buildings and inscriptions, and his exceptional abilities enabled him to acquire very complete knowledge of the subject. Every word in his laconic style counts, and his diagrams, which possess the same quality, are fully explanatory without the addition of an unnecessary line. The following notes from a translation of the Greek section, prepared by the writer of this article, may interest some of the readers of the JOURNAL.

The author, after opening with a brief account of the conditions prevailing at the early stages of the development of Greek architecture, describes the methods of construction in detail. An interesting account is given of Greek stone work; beginning with the actual quarrying, the dressing, transport, setting, piecing and connecting, to the final operation of dressing *in situ*, are all commented on.

The particulars given of roof construction are derived partly from inscriptions. Choisy refers to that most interesting document on the subject, the specification of the Piræus Arsenal, which exists and preserves in minutest detail the dispositions adopted there. This dates from the fourth century B.C., but the method of

construction is the same as that found amongst the Phrygians and the Etruscans and goes to prove its very great antiquity.

Greek roofs were constructed over a series of transverse beams which in turn carried, by intermediate struts and blocks, a central longitudinal ridge beam. This is very different in principle from our modern trussed roof, where the tie-beam is held in position by the outward thrust of the rafters, with the assistance of the king-post. The beam was considered by the Greeks as under compression only, not as a tie, the tensional principle being then unknown. This is radically different from our system of construction, the Greeks relying upon the use of supporting beams—in fact, a pure and simple system of building up, actually stone construction in wood. The inferiority of this method compared with our own is obvious; with a beam heavily loaded in the centre enormous timbers were required for the smallest roof. The central aisle of the Piræus Arsenal was only 20 feet wide, yet the scantlings of the cross beams measured $0.67\text{m.} \times 0.75\text{m.}$ (say $26\frac{1}{2}$ inches \times $29\frac{1}{2}$ inches). It is obvious that under such a system sufficiently large timbers could not have been procured to roof a temple like that at Girgenti, of almost double the span. In confirmation of this conclusion, the statement of Strabo is quoted, that the temple at Miletus remained roofless on account of its magnitude, as there evidently were no timbers big enough to roof it. The author concludes that the nave of this temple was not intended to be roofed. Inscriptions from the Eretheum show that one of the cellæ of the temple had an open roof, the other a flat ceiling. This ceiling was composed of beams supporting framed coffers of wood with panels of terra-cotta. The mouldings were not worked on the wood framing, but were applied later. They sometimes consisted of beading nailed to the inner angles, sometimes of moulded fascias applied to the upper surface of the structural timbers.

In dealing with building procedure Choisy gives the course of the operations, and he concludes from evidence at Segesta, Ægina and Selinus that the colonnades were erected first to produce an effect as rapidly as possible.

In his description of ornament and decoration, reference is made to revetments of terra-cotta, wood casings and stucco work. He believes stucco was originally used because of the difficulty experienced in dressing the surface of stone. Mouldings are shown to have been developed by the Greeks on scientific principles, and a suggestive account is given of their practical and æsthetic design to meet actual conditions.

Certain principles affecting the use of ornament and figure sculpture are enunciated. "In decorative work," Choisy writes, "detail is treated with surprising care and refinement, whether it be in a statue, in an ornament in relief, or in a painting. The colossi of the Parthenon and of the temple at Olympia were covered with carving. The soffits of the cornice of the Parthenon were enriched with running ornament intentionally so delicate that the design can hardly be seen. If a larger and more legible design had been applied, the general effect would have been spoilt. Greek embellishments do not always strike one at first, but reveal themselves upon closer study. The Greeks would not disturb first impressions, but reserved for discovery and analysis a wealth of accessories to arouse a sense of perfect accomplishment. Thus was shown a true and delicate appreciation of the proper subordination which must necessarily be established between masses and detail by allowing the elements first to claim the attention, whilst details remained unobtrusive."

Following a general survey, the Orders are separately dealt with. The origin and characteristics of the Doric Order are first described; its various features are defined and an interesting dissertation is given on the deviations from true craftsmanship occasioned by attempts to copy a type designed originally for construction in another material. The significant custom is alluded to of restoring the temples in the style of the day, eight different types of column having been counted in the Heræum of Olympia, corresponding to those used at the particular dates when the restorations were effected. The chronological changes which took place in the appearance of the Order are shown by diagrams, and the temples at Pæstum, Athens, Olympia and Pergamum are illustrated to show the continuity of idea that obtained throughout Hellas.

Having considered the Doric Order as a whole, the component parts of the Portico are dealt with in detail, commencing with the stylobate and reviewing in turn the exterior colonnades, the interior colonnades, the walls and the ceilings. Here are shown the subtle changes in each feature at each period just as they occur in the Orders as a whole. In dealing with the Doric Order reference is made to the exceptional use of the base of the column, the diminution of the shaft, its entasis and fluting. The capital follows, with its mouldings; then the architrave, with the variations of span arising from the use of wood and stone lintels. In turn he describes the frieze and its construction, including the difficulties encountered in spacing the triglyphs. In referring to the cornice,

its eminently rational form, unknown to earlier architecture, is commented upon. The last external feature is the pediment, whose tympanum seems so peculiarly appropriate as a background for figure sculpture in full relief.

In the interior colonnades reference is made to the variations found necessary to adapt details to the changed position, lighting, etc. Then follow remarks on the entablature, the antæ and the treatment of voids, soffits, etc. The description of the Order is brought to a conclusion with some details of the spacing of the characteristic features and of their mutual relationship, and the influence which brought about their studied regularity or irregularity.

The Ionic Order is similarly treated, and by judiciously comparing the differences between the two Orders the characteristics of each are made clear. The more slender Ionic Order is considered as representing the more feminine and elegant of the two types of beauty existing in nature, just as the Doric typifies the more masculine and robust. The connection with the Greek colonies of Asia is shown and the likelihood of a wooden prototype is referred to, also the influence which led to forms used in the Ionic Order being of lighter proportions than those of the Doric. Choisy believes the Ionic Order was developed in a rainless region where flat roofs prevailed. This hypothesis is summarised as follows: "The Ionic Order is inherited from a flat roof construction of small timbers, the Doric Order from a roof construction of heavy timbers. One was developed in Ionia, a land that nourished only small trees; the other belongs to the region of the Thracian forests, the last settlement of the Dorian race."

There is an interesting description of the development of the Ionic base and of the various modifications to which it was subject, and similarly the gradual evolution of the capital is treated from its rude corbel form which diverged into the two familiar types, one the baluster form of capital, and the other with diagonal volutes: both of these capitals were highly ornate and elaborately decorated.

The difference in the appearance of the Ionic frieze, with or without its continuous band of sculpture, is compared with the Doric frieze with triglyphs; again, the rich Doric pediment, with its sculpture, is contrasted with the usually plain tympanum of the Ionic Order.

Discussing the other varieties of the Orders—the Corinthian, the Caryatid, and the Attic—their relationship to the two fundamental orders is shown. Choisy considered the Corinthian capital the result of an applied metal treatment, and suggests that the Vitruvian legend of its origin arises from the fact that Callimachus, its author, who had observed the basket on a tomb enveloped by the leaves of an acanthus, was a goldsmith. "The bell of the capital," he says, "can be conceived as being enveloped in leaves of stamped copper, the leaves being beaten separately and fixed in a row by riveting them to a ring encircling the capital; a sheet of metal rolled up would naturally give the volutes a spiral form; even the centre of the volutes, so difficult to execute in stone, could be easily done with the burin; and thus, if a metallic origin be admitted, apparent anomalies disappear." The tradition that metal applied to capitals continued until the end of the Roman Empire Choisy considers as tending to confirm this hypothesis, and reference is made to the fact that, according to Pliny, there were capitals ornamented with bronze in the Pantheon at Rome, and that at Palmyra and Gerasa columns can be seen with the plain bell of the capital surrounded by metallic foliage.

The ornament of the capital of the Choric Monument of Lysicrates has, as Choisy points out, a touch of caprice appropriate to an edifice of small dimensions, and he considers it was the translation in marble of a metal type in which the marble copy has not lost the influence of the metal form from which it was derived.

Reference is made to the Hybrid Orders, chiefly found in debased Asiatic monuments beyond the boundaries of Hellas, and due to the existence of both Phœnician and Greek influences side by side. The use of the Orders in combination is shown to have followed their characteristic qualities, the Doric being distinguished as the appropriate Order for large temples, whilst buildings of moderate size were usually designed in the Ionic Order. Such were the small temples of the Acropolis at Athens. The proportions of the Orders and the modular system are discussed at some length. On the subject of the modular and graphic methods, Choisy says: "A rhythmical harmony is introduced into the composition in both methods, only to be compared with that of versification. The two rhythms of language and architecture are closely allied; they seem to respond to the first awakening of taste. Greek literary prose only commenced at the time of Herodotus—that is, about the beginning of the fifth century. Until then verse was the only medium for recording thought. The rhythm of speech and that of architecture correspond. They are two simultaneous manifestations of the instincts of one epoch." Again he says: "In the architecture of temples the Greeks considered rhythm exclusively; in the

late periods, at least, their buildings appear as abstract conceptions apart from anything which might denote size. They were not designed with the idea of creating an impression of mere grandeur, but to give a feeling of unity and harmony. . . . Thus, far from seeking to express the material size of a structure by varying the scale according to its proportions, all trace of scale is, so to say, effaced by giving the building the same appearance whatever be its dimensions."

Choisy's remarks on visual corrections and refinements are largely based on the discoveries of Pennethorne and Penrose. He considers that the refinements were intended to be of visible value themselves. "The spectator," he says, "unconsciously feels their presence and recognises a subtle consideration which charms. Contours assume a studied grace, an air of distinction to which taste cannot remain indifferent; the edifice escaping the commonplace appearance of structures of rigid lines becomes imprinted with an unexpected and stimulating character which may escape analysis, but which is appreciated even if one is ignorant of the true reason and cause."

Dealing with the disposition and grouping of buildings the author speaks of the restrictions arising from the limitations of sacred sites as well as the nature of the ground. The picturesque architectural treatment which results was due to the effort made to make the building harmonise with the landscape. On this subject the buildings on the Acropolis of Athens are reviewed and carefully analysed, and the balanced grouping of its buildings is contrasted with the absolutely symmetrical arrangement adopted in later Hellenic work.

A miniature history is given of the Greek temple, and the gradual process of its development is shown. The court of the Mycenæan palace became the temenos, which had its propylæum, and the portico in front of the megaron became the frontispiece of the sanctuary. Characteristic temple plans are considered and the modifications and development which took place in the hieratic type are explained in considerable detail both as regards the proportions of the temple and as regards the type of portico adopted at each period. Reference is also made to exceptional plans, and particulars are given of images and altars.

The cella and its internal treatment, roofing and lighting, are all considered, and some conclusions are arrived at as to the existence of a gallery and the means of access thereto.

The construction of the cella roof leads to the question, once so much disputed, as to the hypæthrai opening and the internal lighting of the temple. This seems to solve itself on lines indicated by Choisy, that the intensity of light in southern latitudes makes a roof opening or clerestory unnecessary.

An interesting résumé of the accessories of the temple—its ornaments, sculpture and painting—is given. The pedimental sculpture, metopes, bas-reliefs and the sculpture on the tambours of columns are all described, as well as the temple deities. Colour treatment, decoration and altars are next considered, and the complete temple is visualised in all its beauty. The concluding portion of this part of the history deals with civil architecture. The Propylæa Theatres, Stadia, Hippodromes and Gymnasia are each fully described, also the more popular places of assembly, the civic porticoes and public gardens. Finally, commemorative and funerary monuments are surveyed and an account is given of domestic architecture, public works and works of defence, including roads, bridges, aqueducts and sea-works. Choisy seems to have consulted every authority and document on the subject of Greek architecture, and of this details are given in the table of contents.

The above notes are only intended as a brief review of one section of *L'Histoire de l'Architecture*. The whole work is of absorbing interest and value and well repays time spent in its study.

HERBERT WIGGLESWORTH [F.].



REVIEWS.

FORM AND COLOUR.

Form and Colour. By Lisle March Phillipps. 80. Lond. 1915. 7s. 6d. net. [Duckworth & Co., 3 Henrietta Street, Covent Garden, W.C.]

Of many books a fairly correct opinion may be formed on a rapid and almost superficial perusal. Such is certainly not the case with the book before us, which, both in order to do justice to the author, to understand his thesis, and to secure the enjoyment to be derived from admirable expression, requires and deserves the most careful reading. For the writer shows himself to be a keen and sympathetic observer, as well as a thoughtful analyst of what he observes, and possesses that gift of clear expression which enables a reader to follow the arguments, derived from a wide field of experience, without difficulty; for these are stated so moderately and with such an absence of dogmatism as never to arouse in the reader that latent desire to question or oppose statements which are new to him.

Nor is he advocating some new system of treatment to be based on a new theory. Mr. Phillipps's book is rather a philosophical essay or treatise on an aspect of the subject of form and colour not previously dealt with, and for which an active mind and wide experience have qualified him to render profoundly interesting by a wealth of historical and natural illustration. His general thesis may be briefly stated thus: "In all art *Form* stands for the intellectual expression or motive, *Colour* for the emotional." He expressly guards himself against asserting that there are no exceptions to this general rule; but explains and supports it by examples from Nature and Art, especially architecture, in language which is at once clear, temperate and eloquent.

The first chapter—"The Testimony of Nature"—expresses very charmingly the purport of Mr. Phillipps's proposition. Whether he has not, perhaps, somewhat strained his argument here may be questioned; but as to the accuracy and delicacy of his observation there is no doubt; and his remarks on the power of chiaroscuro in producing emotion are invaluable at this time, when it is often ignored. The comparisons, of the colouring of Western landscape with that of the Tropics are full of keen and sensitive observation.

Perhaps the author is most interesting—at any rate, to us—when dealing with architecture. He propounds, as a general axiom, that whereas all Western architecture is "functional"—i.e., expresses its construction—its *Form* therefore appealing firstly to our scientific or intellectual sense, Eastern architecture ignores altogether any evidence of scientific thought in its outward expression. The Eastern mind, he says, loves *Colour*, rather than *Form*, and its appeals are not to a scientific or intellectual sense, but to the mystical or emotional side. He points out how, in Eastern examples, no attention is paid to

maintaining a due proportion between the size or form of the column and the structure it supports; how the mass and the column alike are smothered, or "rotted," as he expresses it, with mystical carving which has no relation to structural fitness, but only conceals structure and abolishes all idea of scientific thought.* He devotes a very interesting chapter to investigation of the development of the Eastern mind to prepare the reader for his argument. What he has to say on Byzantine architecture is full of original and thoughtful observation. His remarks on the treatment of mosaic decoration are among the truest and soundest that the present writer has met with anywhere; they should be carefully read by every architect or artist who contemplates the use of that form of decoration, and, in this matter, the author's observations on the connection of Byzantine art with Venice (pp. 81–83) are most thoughtful and just; no part of the book exhibits more fully his capacity as an understanding and observing critic. One sentence in this chapter is worth quoting: "We shall never understand Byzantine art so long as we stick to that point of view" (that it is architecture adorned by mosaic), "for it is of the essence of the Byzantine style that these forms are entirely to give up this structural value of theirs in order to serve the purposes of the new building material" (mosaic). . . . "The mosaic is used as an architectural motive," and he proceeds to show how the soft colour-charm of gold mosaic arises from its being treated like a plastic building material—but his own exposition should be read in his own words. In a later chapter he deals with Venice and the Venetians in the Renaissance period.

We have a chapter entitled "Eastern Art and Western Critics," which will be read with satisfaction by all true lovers of art. It deals with those critics who would make especial merits of what are, in fact, the deficiencies or immaturities of Japanese and other Oriental art. He does this not by mere assertion, but by a calm and penetrating examination of the growth of all art, in various schools, and of its development in both intellectual and emotional power.

Then, quoting Mr. Binyon's assurance that "Japanese art is essentially an art of line," he says, "I agree with him, and I go on to remark that of all the indictments it is possible to bring against the art of any nation, the indictment that it is essentially an art of line—in other words, that its capacity for form expression is satisfied with what line can yield—is the most condemnatory possible." He gives his reasons, referring back to the primitive art of the cave-dwellers . . . "in time when artists were lacking in any consciousness of form which it was beyond the power of line to convey." In pages 122–123 may be read the same arguments which effectively deal with this type of art critic. In his chapter on Greek sculpture Mr. Phillipps again shows his ability to deal

* One must assume that the author excludes Arabic architecture from this classification.—J. D. C.

with his subject comprehensively, while exercising a keen and appreciative power of observation. His remarks on the aims, perfections and limitations of Greek art are the outcome of a thoughtful and cultivated mind. "Greek art," he says, "is essentially, as all have recognised, an art of form. It is true the Greeks used colour, and used it freely, but they invariably conceived of colour as a merely descriptive agent, and as strictly subordinate to form. Colour used in this manner is, of course, form's most able lieutenant."

Greek sculpture, in representing any divinity, did not aim at the spiritual or mystical; it represented, and indeed thought of, a divinity as a glorified form of humanity, embodying the special virtue it suggested, to which humanity might endeavour to attain. "The ideal is the same as is indicated by Greek philosophy, Greek thought, Greek poetry . . . and is the expression of the control of a central, clear-seeing intelligence. Greek ideas, being always intellectual, are always definite, always clear-cut. That is what fits them so well for sculpture." In the Hellenistic period, owing to the penetration of Eastern thought, these principles were relaxed, and a style more emotional and experimental succeeded, which essayed to portray emotion and the passions, especially of anger and mental trouble. The serene calm of the sculpture of a people whose ideals were purely intellectual no longer sufficed for a people whose thoughts and ideals were undergoing a change in which the spiritual and emotional began to have a place and to demand recognition. Such, in brief, are some of the opinions which the author puts forward in a very able chapter, which, however, must be read in its entirety. Finally he deals with the Christian and West European views and changes of view on art. At first religion was mystical or ecstatic; then came an intellectual revival. In the former condition architecture, in the Byzantine period, showed little attention to external form, while interiors glowed with colour and mosaic; gradually, with the advance of knowledge and cultivation, chiefly protected among the religious bodies, the demand for form, in their churches at least, awakened, and with the Renaissance culminated. Thought was no longer in chains, but the spiritual and emotional influence existed. Thenceforward men have endeavoured to express in art the double demand.

This review may be regarded as an attempt to give some notion of the book's contents. It is not for the guidance of the student, but the mature architect will read it with enjoyment and will recognise in it qualities which are not common. It is written in the spirit of the cultivated and thoughtful gentleman, who makes one desire to agree rather than to question. It is a courteous book, earnest but not dogmatic; admirably written as to language, yet free from all pretence.

J. D. CRACK [*Hon. A.*].



9 CONDUIT STREET, LONDON, W., 4th March 1916.

CHRONICLE.

R.I.B.A. Record of Honour : Twenty-fifth List.

Wounded.

HAKE, GORDON [*Associate*], 2nd Lieut., 1st Wilts Regt. Wounded on 16th June at Hooge.

Mentioned in Dispatches.

MOSCROP, WILLIAM NOEL JOBSON [*Student*], Lieut., 5th Durham Light Infantry. Mentioned in Lord French's Dispatch published on 1st January for gallant conduct in the field.

Lieut. Moscrop is the son of Mr. W. J. Moscrop [*F.*], of Feethams, Darlington, and was called up with his regiment on the outbreak of war. He became a Student R.I.B.A. in 1913, and had submitted some designs for the Final Examination previous to the war.

Serving with the Forces.

The following is the Twenty-fifth List of Members, Licentiates, and Students R.I.B.A., serving with the Forces, the total to date being 55 Fellows, 419 Associates, 220 Licentiates, and 269 Students :—

FELLOWS.

Blomfield, C. J. : Captain, Artists' Rifles.
Hartree, John : A.S.C. (M.T.), officer on motor convoy.

ASSOCIATES.

Hall, Alner W. : Captain, Artists' Rifles.
Wellburn, George T. : Royal Engineers.
Wright, Cecil L. : Artists' Rifles.

LICENTIATES.

Hoffman, G. Spencer : 2nd London Sanitary Co., R.A.M.C. (T.F.) ; gazetted Lieutenant 17th June 1915 ; promoted Captain 17th December ; now at the front in France.
Smith, W. Mackenzie : 1st Bn. Transvaal Scottish Regt.
Watson, Henry B. : 6th Canadian Field Engineers.

STUDENTS.

Blackwell, J. W. : U. and P. S. Corps (Royal Fusiliers) ; joined in 1914, and now in the firing line in France.
Ovenden, Edgar Wm. Clowes : West Kent Yeomanry ; has served in Gallipoli and in Serbia.

Promotions.

Major E. J. Bridges [*Associate*], to Lieut.-Colonel, R.E.
Lieut. Michael T. Waterhouse (son of Mr. Paul Waterhouse), to Captain, Sherwood Rangers.

An Associate's Narrow Escape.

Mr. Frederick Thwaites Bush [*A.*], a private in the 29th Vancouver Regiment, 2nd Canadian Expeditionary Force, was

one of the thirty volunteers whose gallant exploits were described by the Special Correspondent at Headquarters in the papers of the 4th ult., after their most successful attack on one of the German front-line trenches during the night of 30th to 31st January, when they destroyed two enemy machine guns, killing over forty of the enemy, and taking some prisoners, all returning safely to their own trench, with but two of their party wounded. Mr. Bush had a marvellous escape, being caught in our own barbed-wire entanglements amid an inferno of machine-gun, rifle, and artillery fire, but managed to force his way through to safety minus part of his equipment. Before the war Mr. Bush was engaged in the building of the new Canadian Pacific Hotel at Vancouver. He was previously on the staff of H.M. Office of Works, and a member of the Artists' Rifles. On the outbreak of war he immediately volunteered for active service.

In the Firing Line, Singapore.

Mr. S. J. EDWARDS [A.], of the Singapore Volunteer Reserve Force, writes: "We all took a share in the suppression of the Singapore Mutiny. I was then with the 'Specials,' whose duties were motor patrol work, and guarding military and other points of significance. Those who had the chance were up in the firing line. They consisted of as cosmopolitan a lot of men as ever fought side by side. There were Englishmen of all descriptions—regulars, volunteers, and civilians: soldiers, sailors and police; Russian, French, and Japanese landing parties off the warships; Chinese volunteers, the Malayan soldiers of the Sultan of Johore, Indians, and a few Dyaks from Borneo."

Charing Cross Bridge.

The following letter appeared in *The Times* of the 29th February:—

28th February 1916.

SIR,—Even at such a time as the present the future of Charing Cross Bridge can hardly be without interest to Londoners.

It is announced that the South-Eastern Railway Company have presented to Parliament a Bill empowering the Company to spend a large sum of money on strengthening one half of the present bridge, a work which the Chairman states is not to be undertaken until after the War. This work, when completed, will add nothing to the much-needed accommodation for road traffic over the river at this point, but would inevitably prolong indefinitely the existence of the present unsightly bridge which the Chairman of the Company admits "is not an ornament to the river." Surely this is a proposal that should be deferred till after the War, when the whole scheme, in which London is so much concerned, could be fully and carefully considered.—We are, Sir, your obedient servants,

ERNEST NEWTON, A.R.A.,

President R.I.B.A.

ASTON WEBB, R.A.,

Chairman of Council, London Society.

Home Problems after the War.

The National Housing and Town Planning Council are organising a National Congress, to be held at Caxton Hall, Westminster, from Tuesday, 11th April, to Friday, 14th April, to consider "Home Problems after the War," more especially those relating to

housing and agriculture, and the possibilities of averting unemployment in the building trade. The need for facing these problems now, and not postponing their consideration, has been strongly insisted upon in both Houses of Parliament. "We have learnt," said Lord Parker in the House of Lords, "or ought to have learnt, from the crisis through which we are now passing, how heavily a nation may be handicapped if no one has taken the trouble to think out on its behalf beforehand the measures which ought to be taken to meet some particular emergency which may arise, or to mature the plans and organisation necessary for carrying those measures into effect. . . . Whatever excuse we may have for our unpreparedness for war, we shall surely have no excuse if we are similarly unprepared for peace. The War may have been improbable, but peace is certain, however long delayed: and when peace comes we shall have to face a situation which, unless it be wisely and prudently handled, may entail on our posterity evils equal to, or even greater than, those entailed by the War itself." The Prime Minister, in the House of Commons on 9th December, referred to the great importance of the economic, social, commercial, and financial problems that will arise after the War, and said that "not even our preoccupation in the endeavour to ensure victory ought to prevent us from taking measures to secure that the problem shall be carefully explored by expert investigation." We owe it to the men who left their homes and occupations and risked everything for their country to provide them with honourable means of subsistence on their return to civil life. By slow demobilisation the danger of flooding the market with labour would be avoided, but the cost would be very great. Taking the building industry, for instance; if 200,000 workmen are kept with the Colours in order not to flood the market, they would cost for their maintenance and allowances to dependents some £500,000 a week—a sum which, if devoted to setting the men to work constructing cottages for six months, would defray the cost of building some 65,000 cottages.

The National Housing and Town Planning Council suggest that the problem should be met by the preparation of building schemes of real service to the community, and they have decided to concentrate their efforts on the task of securing such action as shall provide that those workmen who have been recruited from the building trades shall find ample work waiting for them on their return home. The National Congress is convened to consider the following questions:

- (1) (a) The preparation of Housing Schemes for the building of urban and rural cottages—these schemes to be put into operation at the close of the war so that the danger of serious unemployment in the building trades may be avoided.
- (b) The provision by the Government at the close of the war of the necessary capital to enable such schemes to be carried into effect.
- (c) General housing finance at the close of the war.
- (2) (a) The need for financial aid being given by the Government to Local Authorities in the preparation of schemes for the clearance of insanitary areas.

- (b) Consideration of the gain to the nation in better citizenship and greater productive capacity when those whose housing conditions are poor are transferred to better surroundings and their standards of life are raised.
- (3) (a) The provision of homesteads with small holdings, and the intensive cultivation of land.
- (b) The re-organisation and extension of the methods by which capital can be provided to aid all classes of cultivators of the land, so that the rural resources of the Kingdom can be adequately developed.
- (c) The preparation of schemes for settling disabled soldiers and sailors on the land.
- (d) The preparation of schemes for afforestation, and for the reclamation of waste lands.
- 4) The preparation of Town Planning Schemes, in anticipation of future developments, and more especially schemes for the construction of new arterial roads, playgrounds, and other open spaces, so that if employment is needed for unskilled workmen at the close of the war these workmen can be employed at tasks of real service to the community.
- (5) The possibility of adapting new and cheap building materials and securing economies in the design of cottages, provided that the essential standards of good building construction and of the wholesome environment of dwellings are not impaired.

It will be proposed at the Congress that a National Deputation shall be appointed to place the proposals of the Congress before the Government.

In their Preliminary Programme the promoters of the Congress state that no better way of providing against unemployment in the building trade at the close of the War could be devised than that of setting men at work to which they are accustomed, and in which full value for wages paid will be secured for the country. It is not suggested that the State should provide capital for this purpose before the end of the War; but the plans should be prepared, the designs should be exhaustively considered, the areas in which the houses are to be built should be properly planned, provisional agreements for the purchase of the land should be entered into, and all the preliminary details completed ready for actual building operations to be commenced without delay when the War closes.

The R.I.B.A. will be represented at the Congress by Mr. Ernest Newton, A.R.A., and Sir Aston Webb, K.C.V.O., R.A., C.B.

The Congress fee will be 21s. for each representative or member, and this will include the subscription for all the Congress Reports and papers. All questions relative to the Congress should be addressed to the Secretary, Mr. Henry R. Aldridge, National Housing and Town Planning Council, 41 Russell Square, W.C.

Economics of Town Planning.

Dealing with the cost of development in his able Paper on "Economics of Town Planning," published in *Garden Cities and Town Planning*, Mr. John S. Nettlefold says:

It is of no use providing a plentiful supply of cheap land unless the cost of town and estate development is seriously reduced. Necessities must be provided before luxuries are considered. Light and air are far more important to public health and well-being than magnificent architecture and extravagant engineering in the way of unnecessarily wide roads, double sewers, and extravagant kerbs and channels.

One of the main objectives of those primarily responsible for the English Housing and Town Planning, etc., Act, was to reduce the cost of town and estate development, and it is possible under rational town planning schemes to reduce this item by at least 50 per cent., but up to the present most of the schemes published have increased this charge instead of diminishing it, and unless town planners become more economical in their ideas, this new movement will result in worse living conditions for the great bulk of the population, owing to their not being able to afford the high rents due to extravagant development.

Any expenditure incurred on development is passed on to the tenants, from which it follows that extravagant development schemes must cause higher rents or greater building density. No business man will undertake the trouble and risk of estate development unless he is able to recoup himself for his expenditure, and also make a profit.

It is not reasonable to reduce land values in order to make more open development sound business and then cause money to be spent unnecessarily on estate development. This is undoing the good previously done.

The beautiful city of Paris is a case in point. It is often mentioned as a splendid example of town planning, and so it is from the spectacular point of view, but from the economist's point of view it is most disappointing. The principal streets and boulevards are very wide and handsome, but when one examines closer (goes into the houses and looks at the backs), it is found that in very few instances is there a yard of land that has not at least one story of building on it. The poorer classes are huddled together and piled on top of one another in a most unhealthy manner, and even those better off are often quite unable to obtain reasonably healthy and properly ventilated housing accommodation.

Berlin is another example of the disastrous economic effect of extravagant town planning. A large proportion of the population lives in tenements whose only ventilation is from a narrow well, four, five or more stories deep. This is partly due to high land values, caused by allowing such intensive building, and partly due to extravagant development, which enormously increases the cost of building sites.

Touching open spaces, a costly item in town and estate development, Mr. Nettlefold says:

In the lay-out of small house estates the gardens to each house should not be made too large, because the average man will not cultivate a large garden, and as he cannot afford to pay someone to do it for him, large gardens to small houses will, many of them, become mere rubbish heaps. It is far better to arrange small gardens to each house and provide allotments for those who want them and will, therefore, cultivate them. These allotments earn some revenue.

By locating allotments, playgrounds, and playing fields on back land where no money has been spent on development, very great economies can be effected, and the people get more benefit from the open spaces at the backs of their houses than they would do if these were located some distance away. The reduction in the cost of open spaces, owing to their having no cost of roads or sewers to bear, will enable land and building developers to provide more of them.

No town can be considered satisfactory that does not include within its borders a reasonable number of small holdings located on cheap land, which for various reasons, such as difficulty in sewerage, will usually be available.

Public parks are still required in congested districts developed under the bye-laws, but in town planning schemes a plentiful supply of small open spaces evenly distributed all over the area is much more useful to the people, as well as being much less expensive. In well ordered town-planning schemes large public parks are nothing but a luxury, and should not be arranged for unless given by some generous donor who also provides for the upkeep.

To conclude. Extravagant development raises rents and makes decent living conditions economically impossible, except for a favoured few. It is in no way necessary to spend

large sums of money in order to produce the City Beautiful. Harmony can be achieved without reckless expenditure, and there are many ways in which under town-planning methods money can be saved instead of, as in the past, being wasted in ways that injure instead of improving a town or city.

The City Beautiful will be of no practical use unless it is also the City of Common-sense, providing healthy homes for all classes on a sound economic basis.

Scarcity of Houses.

Mr. Henry R. Aldridge, Secretary of the National Housing and Town Planning Council, in an article on Cottage Building after the War, appearing in the *Welsh Housing Year-Book for 1916*, expresses the opinion that the shortage of houses amounts to at least 400,000 (of which 100,000 represent the number of cottages which should be built to satisfy rural needs). In the years following the War we shall need to make up this deficit, in addition to providing the number of cottages needed annually to meet the normal needs of the growing population. Mr. A. W. Shelton, of Nottingham, estimates that every week from 1,500 to 1,600 new houses are required to meet the normal growth of the population. In addition, at least 600 new houses are each week urgently needed to replace worn-out dwellings, or to mitigate overcrowding in congested areas. To provide these an annual expenditure is required of from twenty-five to thirty millions sterling.

The London Society's Annual Report, 1915-16.

The London Society state in their Annual Report that they have now seven architects steadily at work on the Development Plans of Greater London under the direction of gentlemen who have given up much of their time for this purpose. The Committee in charge is now constituted as follows:—Sir Aston Webb, K.C.V.O., C.B., R.A., Chairman; Mr. Carmichael Thomas, Mr. Raymond Unwin, Professor Adshead, N.W. Section; Mr. Arthur Crow, N.E. Section; Mr. W. R. Davidge and Mr. Herbert Shepherd, S.E. Section; Mr. H. V. Lanchester, S.W. Section; Mr. H. J. Leaning and Mr. W. E. Vernon Crompton, N. Section; Mr. David Barclay Niven, S. Section (Mr. Niven is also superintending the S.W. Section while Mr. Lanchester is in India); Mr. Lawrence Chubb and Mr. Basil Holmes, Open Spaces; Mr. Robert Atkinson and Mr. E. Guy Dawber. Mr. A. E. Richardson has had entire control, and the Society expresses its indebtedness to him for the energy and skill he is expending in co-ordinating the immense amount of valuable information to be shown on the Plan. The Society are working in cordial co-operation with the Royal Institute of British Architects. They have also been accorded the full sympathy and assistance of the Borough Councils, and particularly the co-operation of Colonel R. C. Hellard, C.B., of the London Traffic Branch of the Board of Trade. The cost of the Plan will be about £1,000, of which at least £100 has still to be raised.

Referring to the Bill before Parliament seeking powers to strengthen Charing Cross Bridge, the opinion

is expressed that the artistic result, so far as can be gathered from the published particulars, would be nothing less than deplorable; and as the scheme provides for no road bridge, and there seems no possibility of completing the work for the duration of the War, the Society intend to use every means within their power to oppose it. The cost of the scheme is estimated at £150,000. A special sub-committee of the London Society has been appointed to deal with this matter.

Arrangements are being made for the reading of Papers connected with the objects of the London Society. Mr. Alfred Moor-Radford is to read a Paper on "Kensington Past and Present," in the Hall of the Royal Society of Arts on Friday, 17th March, at 5 p.m. Lord Claud Hamilton will preside. It is hoped that Papers will be read during the spring and summer by Mr. Arthur Crow, Mr. W. R. Davidge, and Mr. Lawrence Chubb.

L.C.C. Survey of London; Geffrye Museum.

The Local Government, Records and Museums Committee of the London County Council have decided to discontinue the printing of further volumes in the series of the *Survey of London* until after the conclusion of the war. The London Survey Committee propose to continue to collect, at their own expense, materials for the volumes pending the resumption by the Council of the work of publication.

The Committee have arranged for the exhibition at the Geffrye Museum, Kingsland Road, of the paneling removed from two rooms at No. 8 New Inn, and of a plaster ornament from over the front entrance to No. 17 North Side, Clapham Common.

Augustus Welby Pugin and the Gothic Spirit.

Architectural students interested in Augustus Welby Pugin should not miss the chapters on Pugin in Monsignor Bernard Ward's *Sequel to Catholic Emancipation*, just published by Longmans. A considerable part of the book is devoted to Pugin and his work, and to the controversies which arose out of it, illustrating an important movement in the history of English art. The following is an extract from *The Times* review of the book:—

"Pugin," says Monsignor Ward, "could not see the humour" in the absurd extravagances of the extreme Romanizers. Nor is this surprising, since it was not theological argument, but his study of Gothic architecture that led to his conversion to Catholicism, and he saw in the great mediæval churches, with their lofty symbolism, not only the sublimest but the only perfect translation of the Catholic ideal into terms of art. For him Catholicism and the Gothic spirit were practically identical. Such a view was bound, sooner or later, to come into conflict with the dominant tendency within the Church, if only because—as Monsignor Ward points out—Rome itself had never been touched by the Gothic spirit. The conflict is very impartially described in these pages, and the description is of great interest to architects as well as to ecclesiologists. In the end Pugin was beaten, but not before he had covered England with Gothic churches that are monuments of his devout genius.

Closing of the Museums.

The exhibition galleries of the British Museum and certain galleries at the Natural History Museum will be closed to the public from Wednesday, March 1st.

The reading room (including the newspaper room) will remain open to ticket-holders as before, except that from March 6th it will be closed at 5 p.m. instead of 7 p.m. The students' room of the Department of Manuscripts will remain open so long as sufficient staff is available. If it should be found necessary to close it, MSS. will be supplied in the North Library for such students as satisfy the Director that their studies are important.

The students' room of the other departments at Bloomsbury will be closed. Applications for access for special reasons should be addressed to the Keeper of the department concerned. The photographic studio will remain open under the usual conditions. The students' room at the Natural History Museum will remain accessible to approved students.

William Burges' House.

Mr. R. A. BRIGGS writes:—Mr. H. W. Lonsdale has very kindly written making two corrections in my article in the last number of the JOURNAL, on Burges' house. He tells me the paintings on the settle in the drawing-room were by H. S. Marks, R.A., and that the frieze round the drawing-room was painted by F. Weekes.

CORRESPONDENCE.

Architectural Organisation in the Future.

Brisbane: 1st January 1916.

To the Editor, JOURNAL R.I.B.A.—

SIR,—Perhaps you will allow me, although not a member of the R.I.B.A., to say a few words in reference to the remarks of my old tutor, Mr. G. A. T. Middleton, *re* "Architectural Organisation in the Future," in the JOURNAL for 25th September last. As usual, Mr. Middleton has excellent suggestions to make, and in his well-known comprehensive style points out where the R.I.B.A. could extend its beneficial influence. As a Londoner, and resident of Queensland for the past five years, as well as being fairly in touch with the architectural profession in Australia generally, I should say that a more direct connecting link with the R.I.B.A. in London would succeed well here, but to do so I would suggest that the Licentiatehip be thrown open for a given period to architects and architecturally-trained men in the Dominions generally, but not in Great Britain, as they had their opportunity some while back. This would, in my opinion, enrol a large number of qualified men who are at present outside the pale. Of course, details would have to be gone into which I am not, at any rate at present, prepared to discuss. It is, however, certain to my mind that the allied architectural bodies in this Dominion are behind the

times and require more direct attachment to the parent body. It is this want of cohesion on the part of the architectural profession that has so sadly weakened our influence and prestige, not alone with the general public, but also with public bodies.

As this brings me into touch with Mr. Charles Hadfield's letter *re* "The Public Misconception of an Architect's Duties" [JOURNAL, 25th September 1915] I should like to say that as a profession we have ourselves greatly to blame for this. I can quite understand Mr. Hadfield's concern as to the remarks made by the Under-Secretary for War in the House of Commons recently. Anyone conversant with the Imperial service and also with Colonial government cannot be surprised at such remarks. The crux of the matter is that as architects we have been too indifferent as to our position. To say that the R.I.B.A. and other similar architectural bodies have been wanting in attention is stating no more than a fact.

To men, like myself, who have spent many years in public service as well as private practice, it does not come as a surprise that the Under-Secretary for War, or any other of His Majesty's Ministers, should think moderately of an architect's position. When I state that throughout the public service of the British Empire there are hundreds of architects carrying out important buildings, with in many cases the whole responsibility of their works, beyond the mere provision of the drawings, etc., yet who receive no better title than "Draughtsman" as an official designation, one may well conceive why Under-Secretaries and other dignitaries of State come to look upon us as of not much account; and this principally because we do not, as a body, insist on being properly recognised and designated.—Yours faithfully,

LEONARD KEMPSTER,
*President, Queensland Government
Professional Officers' Association.*

OBITUARY.

Henry Louis Florence, of 9 Prince's Gate, S.W., and 16 Royal Crescent, Bath, who died on the 17th February, in his 75th year, had been a member of the Institute for over fifty years, having been elected an Associate in 1865. In 1869 he was awarded the Soane Medallion and £50 for a Design for a Club House. In 1878 he was elected Fellow. He served for some years on the Literature Standing Committee, was Member of Council from 1892 to 1897, and Vice-President from 1897 to 1899. The eldest son of the late John Henry Florence, of Streatham, Surrey, he was articled in 1860, and subsequently studied in the Atelier Questel, Paris. He was Travelling Student and Gold Medallist of the Royal Academy in 1870. Starting practice in 1871, he was for the best part of his professional career in partnership with the late Lewis Henry Isaacs, practising at 3 Verulam Buildings,

Gray's Inn. Among the firm's chief works were the Holborn Viaduct Hotel and Station; the old Holborn Town Hall in Gray's Inn Road; mansion for Mr. Edward Lloyd in Delahay Street; Hotel Victoria, Northumberland Avenue; Paddington branch of the London Joint Stock Bank; new library, pension-room, and class-rooms, Gray's Inn; restoration of Gray's Inn Hall; offices for Edward Lloyd, Limited, Salisbury Square, E.C.; Coombe House and Coombe Farm, near Croydon; Coburg Hotel; Carlton Hotel; new station, St. James's Park, for Metropolitan District Railway; Empire Hotel, Lowestoft; extension of First Avenue Hotel; Queen Victoria Memorial, Kensington; the Institute of Journalists; new Library, Museum, and exit staircase, Freemasons' Hall; alterations and additions to the United Service Club. Mr. Florence joined the Architectural Association in 1862 and was President in 1878-79. He was a Fellow of the Geological Society and for twenty-one years a Volunteer officer, retiring with the rank of Lieut.-Col. in 1892 and receiving the Volunteer Decoration. He was Master of the Haberdashers' Company in 1914-15. Always a generous supporter of the Architects' Benevolent Society, he took a strong personal interest in its work, and rarely missed a meeting. He was a member of the Council and for the past two years had been Vice-President of the Society. In addition to annual subscriptions and frequent special donations he contributed recently to the Society's funded property the sum of £1,000 in City of London Corporation Bonds. Mr. Florence was held in the highest regard and esteem by his numerous professional, City, and Masonic friends. A large and distinguished company attended the funeral service held at All Saints' Church, Ennismore Gardens, on the 23rd February, among those present being Lord Sandhurst, Sir Edward and Lady Letchworth, Mr. Sidney Lee, Sir Roper Parkington, Mr. Courthope Munroe, Lady Swinfen Eady, Mr. Edwin T. Hall [F.] and Mr. Austen Hall [F.] representing the Institute. The interment took place in the family vault at Norwood Cemetery.

Sir Laurence Gomme, F.S.A., formerly Clerk to the London County Council, who died on the 23rd February, was elected Hon. Associate of the Institute after his retirement from his official position in 1914. Prior to this, however, he was no stranger to the Institute, having on more than one occasion attended its meetings and contributed to the discussions on subjects in which he was interested, and he had frequently been present as the guest of the Institute at its Annual Dinners. In formally announcing the decease last Monday, Mr. Guy Dawber said that the Council had often been brought into contact with Sir Laurence in his official position, and they recalled with feelings of appreciation the many instances he had afforded them of his interest in the concerns of the Institute, and his invariably helpful suggestions on matters in which the London County Council and

the Institute were mutually interested. Mr. Dawber paid tribute to his researches in connection with the historical and antiquarian side of London, which, he said, had laid them under a deep obligation to him. Born in 1853, Sir Laurence's was educated at the City of London School, where he was a contemporary of Mr. Asquith. At an early age he entered the service of the Metropolitan Board of Works, with whom he remained until the London County Council was constituted and absorbed the Board and its staff. In 1891 he was appointed Statistical Officer to the Council, in which capacity he was largely engaged in the preparation of evidence before various Royal Commissions on phases of London government. In 1900, when Mr. C. J. Stewart, the present Public Trustee, resigned the Clerkship to the Council, Mr. Gomme was appointed to succeed him. He received his knighthood in 1911. Sir Laurence was an ardent student from his earliest years of the history and archaeology of London, and it was largely due to his enthusiasm that the Local Government Committee of the Council has paid so much attention of late years to preserving as much of old London as possible. It was he who suggested that the new thoroughfares between Holborn and the Strand should be called Kingsway and Aldwych, which he had found in an old map of the locality. He was the founder of the Folklore Society, and at one time edited the *Antiquary*, the *Archæological Review*, and the *Folklore Journal*. Among his published works are *Primitive Folk-moots* (1880), *The Literature of Local Institutions* (1886), *Ethnology in Folklore* (1892), *Folklore as an Historical Science* (1908), *The Making of London* (1911), and *London* (1914). Sir Laurence married in 1875 Miss Alice Merck, author of *Traditional Games of Great Britain*, and leaves seven sons.

THE EXAMINATIONS.

The Intermediate; the Final and Special.

The Council give notice that Examinations will be held once only this year, viz.: The Intermediate from the 2nd to the 9th June. The Final and Special from the 22nd to the 30th June.

A notice respecting the sending in of applications, drawings and fees will appear in due course.

Discontinuance of the Preliminary Examination.

The Council hereby give notice that the Preliminary Examination for the registration of candidates as Probationers will be discontinued.

Candidates will for the future be required to submit any of the following Certificates, or such other Certificates as may be satisfactory to the Council:—

• The Matriculation Examination at any University in the British Empire.

The Senior or Junior (Honours) Local Examinations conducted under the authority of any University in the British Empire.

The School or Leaving Certificate of the Oxford and Cambridge Schools Examination Board.

The Examinations held under the Central Welsh Board.
The Examinations for the First Class Certificate of the College of Preceptors.

The Senior or Junior School Examination or the Matriculation Examination of the University of London.

Senior School Certificate or a School Certificate of the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds and Sheffield.

The School Certificate of the University of Bristol.

The Certificate must show that proficiency has been attained in the following subjects:—

Composition and Dictation.
Arithmetic, Algebra and Elements of Plane Geometry.
Geography and History.
Language (either Latin, Italian, French, or Russian).
Elementary Mechanics and Physics.

Candidates who have obtained a success in any of the Board of Education Examinations in Art held in 1913, and subsequently will be exempted from subjects Nos. 6 and 7—viz., "Geometrical Drawing" and "Freehand Drawing from the Round."

The following Certificates from the Board of Education, South Kensington, are accepted as exempting from the eighth subject—viz., "Elementary Mechanics and Physics":—

A first class in the two Board of Education Examinations: Subject 6. Theoretical Mechanics, A. Div. 1, Solids; B. Div. 2, Fluids—Stage 1.

Candidates who do not possess the Board of Education Certificates will be required to submit with their applications drawings showing their knowledge of either Geometrical Drawing or Perspective and Freehand Drawing.

All applications for registration as Probationers must be accompanied by a fee of two guineas.

MINUTES.

At a Special General Meeting, convened in accordance with By-law 70, to elect the Royal Gold Medallist for the current year, and held Monday, 28th February 1916, at 4 p.m.—*Present*: Mr. Ernest Newton, A.R.A., *President*, in the Chair; the Hon. Secretary, and several Fellows and Associates:

Upon the motion of the President, seconded by Mr. Guy Dawber, it was

RESOLVED, unanimously, that, subject to His Majesty's gracious sanction, the Royal Gold Medal for the promotion of architecture be presented this year to Sir Robert Rowand Anderson, LL.D., F.R.S.E. [F.] in recognition of the merit of his executed work, his services to architectural education, and his high character and lofty ideals in the art of architecture.

The Special Meeting then terminated.

At a General Meeting (Business), held Monday, 28th February 1916, following the Special General Meeting above recorded, and similarly constituted, the Minutes of the Meeting held 31st January 1916, having been published in the JOURNAL, were taken as read and signed as correct.

The Hon. Secretary announced that news had been received of the death of Captain Denis H. Walker, of the 5th Battalion Yorkshire Regiment, a Student of the Institute, who died of wounds received at Ypres on the 26th January, aged 26; also of 2nd Lieut. T. B. D. Hough, of the 8th East Yorks Regiment, also a Student of the Institute, who was killed in action in France on the 16th January, aged 19. Whereupon it was resolved that there be recorded upon the Minutes of the Meeting the deepest regrets of members for the loss of these gallant young men who had given their lives for their country, and that

a message of sympathy and condolence be sent on behalf of the Institute to their nearest relatives.

The decease was also announced of Robert Watson, *Fellow*; Henry Louis Florence, *Fellow* and *Past Vice-President*; and Sir Laurence Gomme, *Hon. Associate*, and it was resolved that the regrets of the Institute be recorded, and that a vote of sympathy and condolence be passed to their relatives.

The following candidates were elected by show of hands under By-law 10—viz.:

AS FELLOWS (4).

FAIRWEATHER: JOHN [*Associate*, 1894], Glasgow.

GLANFIELD: ERNEST BUDGE [*Associate*, 1911].

HINDE: EDWARD PERCY [*Associate*, 1888], Liverpool.

WATKINS: HARRY GARNHAM [*Assoc.*, 1895], Nottingham.

AS ASSOCIATE.

WARDROP: JAMES HASTIE [*Special Examination*, June 1915], Melbourne.

The Secretary announced that by a resolution of the Council under By-law 22 the following gentlemen had ceased to be members of the Royal Institute:—*Associates*: Frederick Noel Bamford, William Stanley Bates, Henry Blackadder, John Frederick Fogerty, Richard Malone Hamilton, Walter Herring, Abraham Holstead, Arthur Wilhelm Larsen, John Parlett, Douglas George Saller, Dugald Alexander Shaw, Johannes Thorwaldson Westbye. *Licentiate*: Cecil Alder, Percy Rogers Cooke, William Henry Creaser, J. B. Dick Gorman, Frank Lansdown, John McIntyre, Frank Parker, Alfred J. Rowley.

The proceedings closed and the Meeting terminated at 4.15.

NOTICES.

A SPECIAL GENERAL MEETING will be held on Monday, 13th March, 1916, at 4.30 p.m., to consider a proposal which will be submitted by the Council in order to avoid holding an election for the Council and Standing Committees in 1916, during the absence of several hundreds of members serving with the Forces.

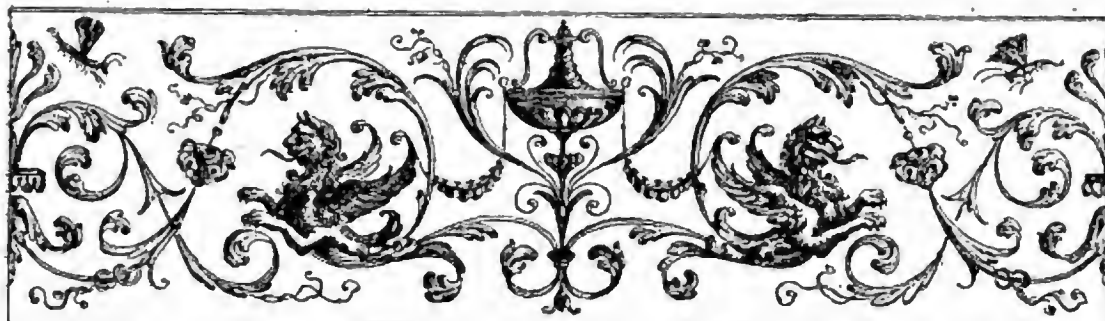
The following Resolution will be moved on behalf of the Council:—

"That, in accordance with the provisions of Clause 33 of the Charter, application be made to the Privy Council to sanction the suspension of the By-laws governing the Annual Election of the Council, the Standing Committees, and the Hon. Auditors, so that the Council, the Standing Committees, and the Hon. Auditors elected in June 1915, shall remain in office until the 30th June 1917."

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Office to let near Bloomsbury Square. Rent £20 a year. Use of telephone, &c., can be arranged. Address Box 255, R.I.B.A., 9 Conduit Street, W.



THE PLANNING AND CONSTRUCTION OF BEET-SUGAR FACTORIES.

By R. H. WEYMOUTH [F.].

INTO the question of the construction and planning of a Beet-sugar Factory, both the process of manufacture to be adopted—whether by diffusion or by the Steffen process, &c.—and the size of the factory contemplated—whether to deal with 500 or with 1,000 tons of beet daily—must largely enter, and the general arrangement only can now be considered, leaving untouched the more detailed consideration of the various departments, as these must follow the requirements of the process chosen.

In addition to the factory being always under wise management, and run on sound business lines, there are sundry initial requirements essential to success. The factory *must* be supplied continuously with beets to keep it working at full pressure throughout the whole of the "campaign," i.e., from about the middle of October for a period of 90 or 100 days, the factory usually running night and day, seven days a week, during the whole time. To ensure that there shall be no shortage of beets, the Company promoting the scheme must have control over some 10,000 to 12,000 acres, with, say, one-third of this entire acreage annually laid down under beet. There are various modes of procedure :—

1. The Company can have agreements of five years or so with the neighbouring farmers, in which it is covenanted that so many acres shall be put down under beet annually, in return for cash payment at a fixed minimum price, with an added bonus for sugar percentage in the beet and for tonnage per acre.

2. The Company can run the factory more upon "co-operative" lines, the surrounding landowners and farmers all being shareholders—a method so successful at the great factory at Dinteloord, Holland.

3. The Company can be in possession itself of the 10,000 to 12,000 acres, with the farmers as tenants—the rents of the farms meeting the interest on the initial capital subscribed; the rotation of the beet crop with the other root crops—say once in every four years—to be settled between the Company's Expert and the tenant.

This last scheme, involving in land, factory, &c., an initial outlay of some £400,000 to £500,000, places the Company in the strongest position, and is the one most likely to command success.

The beet crop with its deep and intensified cultivation, its constant hoeings, the unexhausted artificial manures left in the ground and the ploughing-in of the "tops," makes a crop with fine cleansing properties for the land, to the marked improvement of the other crops in the rotation.

SITE.

The factory should stand upon a site fairly level, and should have ample ground to itself for its accessories. It should tap all the railways within 40 miles round, as it is by this means coal, lime, and other stores are brought to it, and, in large measure, beets also. By the same means the sugar in sacks, the molasses in casks, and the pulp in powder or cakes are dispatched to market. An excellent position for a beet-sugar factory is alongside a main line, with sidings brought on to its own ground, the sidings

extending past the factory far enough to permit of the shunting on to them of 10-truck coal trains. Alternately with the sidings should come the "flumes"—long channels—into which the beets are shovelled from the trucks. Abroad, the sidings sometimes run over the widened flumes, on girders, and the beets fall into them direct. A siding is needed to be run alongside the sugar store and the pulp house.

The factory should also be so situated that it is easily approached by the county roads, so that carts or the Company's motor lorries or its traction engine with consignments from the near neighbourhood can reach it readily. If ever we adopt in this country a "light railway" system, running alongside all roads, as in the Netherlands to-day, it should prove invaluable in the transport of beets to the factory.

Against the head of both sidings and the roadway on to the factory ground, provision is required for weighbridges (with small offices attached) on which the consignments of beets can be weighed as they are brought in, with soil clinging to them. A sample lot—usually 56 lbs.—is weighed, and from it the entire weight of cart-load or truck-load is calculated. A "dirty" lot of beets, entailing a deal of washing in the factory, is a charge against the beet-grower beyond the 20 per cent. additional weight allowed—a point often overlooked by the farmer.

One of the most essential points connected with the choice of a site is the provision of a good *water supply*. The factory should be able to draw upon a fair-sized river or canal, and the supply of water should be both constant and continuous, with an ample margin. Throughout the "campaign" the factory consumes from two to three million gallons of water daily in the cleansing of the beets and in the process of sugar manufacture; and water obtainable from a water company's mains is too expensive, or that from its own artesian well insufficient often for such requirements.

Along the river or canal banks considerable wharfage should be formed, at which barges or wherries can be moored with their cargoes of beets aboard. Here is to be provided a travelling crane with a long jib to empty the vessels rapidly and heap up the great beet-stacks over the concrete slopes. Under cover the beets would heat, but piled up in the open the "white" sugar beets come to little harm till the frosts and the alternate sunshine and frost of our January and February arrive, with an action deleterious to the sugar in the root itself. Water-borne beets have to be weighed in a manner similar to that adopted in the case of those brought by road or rail, except that the weight of the cargo is generally ascertained from the vessel's load-line.

FACTORY ACCESSORIES.

The "flumes" above mentioned are brick or concrete channels, egg-shaped at the bottom like a brick sewer, with wide concrete or brick slopes leading thereto, into which the beets are thrown from truck, cart or barge, and along which they are floated into the sump to the washhouse. Water is drawn in from the river and pumped up into large storage tanks at the top of the factory, and with it is mixed the waste warm water from the manufacturing process itself. The water is then brought from that great height to a manhole at the head of each group of flumes, and through the opened penstock, with a great "head" upon it, driving and cleansing the beets floating in its strong current to the sump. The enormous piles of beets on the concrete slopes, weighing some thousands of tons, are drawn away at the bottom by this method to the factory.

The sump—some 10 feet in diameter and 40 feet deep or so—is sunk near to or in the washhouse, and it is often built up *in situ* with circular steel plates, descending of its own weight as it is put together and the soil inside removed. Into it *all* the flumes are carried with a slight fall, the flumes being used in the order the Manager directs.

Opposite the washhouse the settling pond must be formed. This should be excavated over a large area—two acres or so—and embanked all round, and all the spoil from the factory foundations and engine-beds can well be wheeled up and worked into these embankments and a "high-level" discharge

be obtained into the river. The "effluent" is often slightly impregnated, and to guard against trouble with owners of riparian rights it is sometimes desirable to have filter-beds to deal with the effluent satisfactorily before it joins the river whence it came originally. A vast amount of sediment accumulates in the pond during the "campaign," and the clearing out of the settling pond and depositing the sediment on the land (a matter for arrangement between the Company and the beet-grower) is one of the matters needing attention and giving employment to the workpeople during the months the factory is at rest.

THE PROCESS OF MANUFACTURE.

Beets in a well-equipped and well-managed factory should need no further actual handling after they have been dropped into the flume. Following the customary method of manufacture, the beets are driven by compressed air or other means into the washhouse out of the sump, and, after being thoroughly cleansed in rotary or other machines, they are caught up in an elevator to the topmost platform or floor of the factory proper.

On this topmost platform the beets are re-weighed for "nett" weight and are dropped thence into large circular vessels—the "slicers"—full of skilfully arranged knives; and coming out at the bottom of them, the sliced beets from a travelling carrier fall afresh into "diffusers" (or "infusers"), a series of large circular vats in which the sliced beets are treated with hot water and the "thin juice" is extracted. This "thin juice" is now weighed and mixed with lime to cleanse it of its heavier impurities; then it is driven through a series of filters with canvas strainers; treatment with carbonic gas to clarify follows; and again it is driven, more than once, through a further series of filters. After this final filtration, the juice is thickened into "thick juice" in large circular vessels—"evaporation" pans—and purified afresh in similar but smaller vessels with sulphuretted hydrogen for colour.

The thickened juice or "syrup" is then sent through "vacuum" pans, where under extreme heat of steam it further thickens and crystallization commences; then the partially crystallized mass from a cooling receiver common to all the vacuum pans drops into a row of "centrifugals," in which the sugar in its "granulated" form is flung out, and whence it is driven up on to an upper floor. It descends from that chamber in a shoot into 2-cwt. sacks outside the sugar store.

The residue in the centrifugals forms the "molasses"; this is often drawn off into a large circular reservoir or tank and eventually casked for market, or else it is driven back and worked in with the syrup afresh.

The deposit from the filter presses, called the "slices," largely impregnated with lime and containing a small percentage of sugar in it, is usually heavily pressed and subjected to a baking process in large ovens, whence it comes out in cake or powder as desired, or it is run away in a more liquid form like brewers' grains to serve as cattle food.

THE FACTORY PLAN.

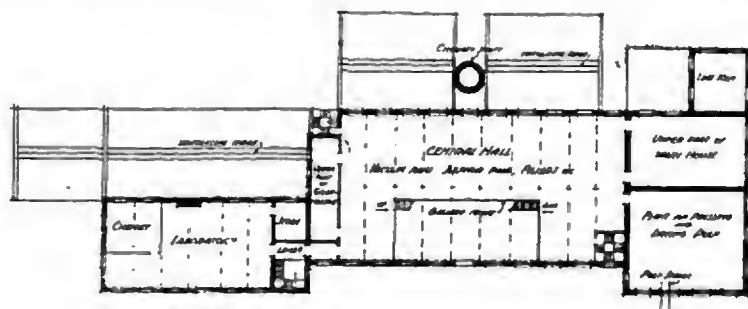
The method of manufacture thus briefly outlined aids one in grasping the general "laydown" of the plan, viz., the washhouse and lime-kiln in one wing, so to speak, facing the flume area and the settling pond (the *wet* side), the large central hall for the manufacture of the sugar itself, and the opposite wing (the *dry* side) where the finished articles are collected, all conveniently backing against the railway sidings.

The boiler-house and the lime store should back right against the sidings, and it should be possible to shoot in coal and limestone just where required, viz., opposite the furnaces and the kiln they feed. The amount of both coal and lime consumed throughout a "campaign" is very great, and forms a very heavy item in the Company's annual outlay; both supplies are usually brought by rail.

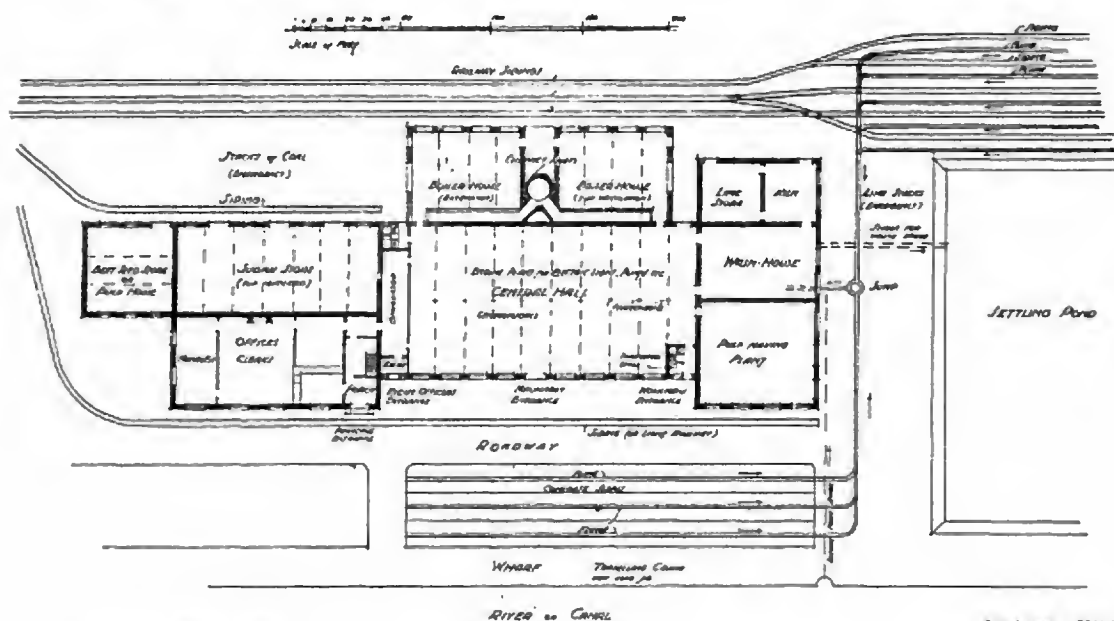
The space on either side of the boiler-house and the lime store gives room for extension and for stacks of "emergency" supplies in the open. The great chimney shaft must find its place here; and as the

whole process is one of working under extreme pressure, it must be of considerable height, to ensure draught to work a range of boilers, the continual stoking of which is done either by hand or by "mechanical" stokers. The high shaft usually dominates the whole countryside.

Adjoining the lime store (with a floor area of some 800 to 1,000 square feet) should stand the steel-framed kiln itself, sometimes in the open, or else enclosed in a kilnhouse of size similar to the store, with an open louvred roof over to allow of the escape of the fumes from the burning lime.



FIRST FLOOR PLAN



GROUND FLOOR PLAN

DRY MEADOWS FARM
ARCHITECT
17 RED LION SQUARE
LONDON, W.C.

In the same wing with the above should stand the washhouse, of an area of some 2,000 to 2,500 square feet, to the side of the central hall. It is into this department that the beets are brought from the sump outside, and here the rotary machinery for cleansing them is fixed, and the foot of the elevator. All the effluent water passes away hence directly into the settling pond facing it.

In close contiguity with the boiler-house should stand the central hall, in which the entire process of sugar manufacture takes place. Placing this central hall against the boiler-house reduces to a minimum the run of the pipes conveying hot water and steam, and effects a considerable saving in the initial outlay. The area of the hall should be some 80 to 100 feet wide by 150 to 200 feet long. On its

ground floor space must be found for a 1,500 to 2,000 h.p. engine, according to factory capacity, and all the plant for electric light installation, pumping work, &c. The granulator occupies a bay or so, and against it stand in a long row the centrifugals. On the upper floor of the granulator is the department where the new-made and still warm sugar is deposited from the centrifugals and whence it is shot down below and weighed. This latter department is cut off from the central hall and is under the supervision of the Excise officials.

A large part of the central hall should be carried up to the roof, and its upper floors only be galleries. The Manager has then, night or day, the entire sugar-making process, with its system of pipes conveying the sugar forward in its various stages of manufacture, under easy control. The atmosphere, when the factory is at full work, grows warm and clammy and contains now and again a whiff of sulphuretted hydrogen, and walls and roof drip pretty freely. This large central space is serviceable, too, for the hoisting under cover of the various sugar-making machines, many of which are of excessive weight.

On the first floor are placed, over the centrifugals below, the series of large circular jacketed boilers, the vacuum pans, and the cooling trough connected with them all, whence the syrup passes on to the floor below. Adjoining are similar "pans," but smaller, in which the syrup is clarified under the action of sulphuretted hydrogen.

On the second floor or gallery there are placed, similar to the vacuum pans, the series of evaporation pans in which the "thin" juice is thickened down to "thick" juice, and also the series of filters used after that treatment.

On the mezzanine floor or gallery stands another row of filters, through which the juice is driven before reaching the evaporation pans; also the apparatus which extracts the lime from the juice by the action of carbonic acid gas.

The third floor or gallery supports large circular vessels, the "diffusers" (or "infusers" in the Steffen process), in which the "thin juice" is extracted from the sliced beets; also the measuring tank, and the vessels in which lime is added to the juice in its first stage of purification.

On the floor or platform over, on a steel-framed staging, are usually placed the circular vessels—the "slicers"—with the carrier and the cranked shoots below. An iron companion ladder leads on to the topmost platform of all (cutting through the roof, with a large lantern light), on which the machine stands that weighs for "nett" weight previous to the sugar extraction; also the head of the elevator from the washhouse.

Very largely the machinery employed decides the heights of the various floors; but in the main the ground floor should be about 18 feet in the clear, the first floor some 16 feet, and the others some 12 feet. This gives the sugar engineer room to carry along or sling up his runs of pipes satisfactorily.

Above the main roofs, often in the open, are placed the storage tanks, capable of holding many thousands of gallons, into which water from the river or canal, also much of the exhaust and waste-water from condenser and factory, is continuously being pumped. The water flows thence to the range of boilers in the boiler-house and to the fire prevention installation, and is carried in heavy piping to the flume-heads. The use of the exhaust water prevents freezing in the tanks.

Either in the central hall or in the washhouse wing can be placed the machinery for dealing with the "by-product," viz., the sliced beets mixed with lime drawn from the filter presses. This "pulp" contains a small percentage of sugar, and after treatment it becomes a most useful cattle food. The machinery consists of heavy presses to squeeze the pulp as dry as possible, and high ovens in which it is baked to powder or flakes.

The sugar store is to be treated as a "bonded warehouse," with door fastenings, window bars, &c., as laid down in the Excise regulations. Its floor should be of reinforced concrete, as in this building the sugar in sacks is stacked up as high as the building will allow, and when the building is full at the end of the "campaign" the floor is subjected to a very great strain by reason of the weight on it. The

walls should be thick, to withstand lateral pressure, and about 20 feet high; windows high up and comparatively small. Sliding doors should be provided to several openings against the railway siding. A span-roof from end to end with skylights and louvres is advisable, as sugar newly made retains a considerable amount of the heat of its manufacture. It should be some 30 to 40 feet wide and of length commensurate with the factory's capacity of sugar output.

The pulp or beet seed stores should generally follow the above construction, but both are free of Excise control. Abroad the pulp store is sometimes a timber-framed structure resting upon a concrete raft. Should, however, the pulp machinery not be in the central hall with a direct shaft thence into the pulp store, but be erected in the washhouse wing, the pulp is stored on its upper floor and delivered through the wall in a shoot on to a truck or cart below.

The laboratory, where the chemist and his assistants test the sample beets from each lot to ascertain sugar "percentage," and also examine so incessantly the test tubes with specimens of the syrup in its progressive stages of manufacture, should be planned of easy access from the central hall's first floor. It needs ample lighting all round.

The Company's offices can well stand below. The tabulating of percentages for gross and nett weights, &c., &c., takes place here. The Manager's room should overlook the whole of the factory grounds as far as possible.

MINOR BUILDINGS.

The workshops for the carpenters, smiths, painters, &c., are usually one-storeyed blocks, well lighted and ventilated, and stand in close proximity to the factory itself.

Near the entrance should be the yard foreman's cottage and the stabling or garage.

Cottages for the employees are desirable, but to place the workpeople out in the villages round is often practicable, and if so the arrangement is a bond of union between the Company and the locality.

On the entrance road should be provided a messroom block, with cloakrooms, &c., and close adjoining the sanitary block for women and girls, under charge of the female staff of the messroom. Latrines for the men can come against the workshops conveniently.

In America the social side of factory life has been greatly developed, with clubrooms, halls, libraries, surgery, &c.; the factory has been made a centre of life and interest to its own beet-growers and the villages round, as well as to its own employees. If run upon co-operative lines under good management such a development should take root over here.

The Manager's house should stand, in this country, to the south-west of the factory, within easy access, night or day. So situated it ensures greater freedom from the smell attaching to beet-stacks and that arising from the fumes of lime-burning.

GENERAL CONSTRUCTION.

Regarding the general construction of the factory itself, a steel-framed "skeleton" with steel and concrete floors or galleries seems the most suitable. Frequent improvements in sugar machinery and the consequent "scrapping" of the older plant, or the readjustment of the existing plant after a "campaign," make the adoption of "reinforced construction" throughout a difficult matter, the cutting of holes for pipes and the fixing of new machinery being liable to lead to a quite unavoidable jarring of the whole structure.

All the stanchions and girders and the constructional steelwork generally have to be calculated in close conjunction with the sugar machinery engineer, the heavy plant on the upper floors or galleries often leading to the concentration of enormous weights upon single points, for which provision must be made in pier or stanchion under. The feet of the stanchions should stand upon and be bolted down to a steel raft, all well bedded in a wide-spreading bed of cement concrete. The engine-bed and the foundations to the various kinds of plant fixed on the ground floor require great floor-space and ample concrete.

The external walls can be built either in the older fashion, in brick or stone work, when they will assist in carrying the weights and deadening the vibrations of machinery, or on more modern lines, when they are but wind-and-weather screens encasing or built into the stanchions.

Large wide windows with opening fanlights should run from stanchion to stanchion. Should the initial outlay be cut down in the matter of brick-walling, the annual painting of the stanchions is to be viewed as one of the employments for the workpeople whilst the factory stands idle some eight or nine months.

The floors and galleries can best be of steel construction filled in with cement concrete, with a surface of asphalt or some type of stone-wood. Each floor or gallery must be laid to fall to channels in it discharging into the open, to receive the constant swabbings consequent upon the boiling over of the syrup, &c., &c., and no corners should be allowed where any kind of dirt can accumulate.

Strongly-framed steel principals resting upon the stanchion-heads—external or intermediate—should support the roofs; these former can well be covered with stout boarding on purlins and slating. Wide skylights are desirable, especially over the well-hole, and large extract shafts to carry off escaped steam, fumes and hot air generally. Similarly a continuous louvred ventilator should be framed into the gable roof to the boiler-house, and all extract shafts and louvred work should be under control with gearing.

The glass in the skylights should be "wire-wove," and the guttering throughout stout enough to receive the ladder-heads against it for the external painting.

In addition to the companion-ladders fixed from floor to gallery, provision should be made for at least two staircases, placed as far apart as possible and communicating with each floor and gallery, with wide landing space, continuous handrail, doors opening out, in accordance with ordinary factory regulations, and at the foot of one of them a timekeeper's office should be worked in; this entrance and its lobby or hall to be for the use of the workpeople.

On all floors provision should be made for flap-tables and seats, at which the men in charge of the boiling syrup, which needs constant supervision, may rest and partake of food during the long spells of continuous work. They can well be placed under the windows, or against gallery railings, or wherever the machinery leaves a little odd space.

Distempering and painting throughout should take place annually, during the summer months.

Appliances for fire extinguishing must be installed throughout the whole factory—sprinklers, hydrants, hose, &c. The entire staff can be well drilled in their use during the months the factory is at rest, between the "campaigns."

Cost.

The cost of a factory and its equipment must be reckoned at from £120,000 to £150,000, some £80,000 to £90,000 of which would be spent on machinery and plant.



REVIEWS.

IRISH ART SCHOOLS, ARTISTS, AND ANTIQUITIES.

- A History of the Royal Dublin Society.* By Henry F. Berry, I.S.O., Litt.D., Barrister-at-Law. With Illustrations. 80. Lond. 1915. [Longmans, Green & Co., 39 Paternoster Row.]
- A Dictionary of Irish Artists.* By Walter G. Strickland. One Hundred and Fifty Portraits, etc. 2 vols., 80. Dublin and London, 1913. [Maunsell & Company, Limited.]
- Royal Irish Academy Collection. Guide to the Celtic Antiquities of the Christian Period preserved in the National Museum, Dublin.* By George Coffey, M.R.I.A., Keeper. Second Edition, with 19 Plates and 114 Illustrations. 80. 1910. [Dublin: Hodges, Figgis & Co., Ltd. London: Williams & Norgate.]

We have heard sometimes of the Irish Capital, have we not? as it was in days gone by, before the Union, with its densely populated districts very dirty; and of many houses, though large, wretchedly dilapidated—an effect of terrible overcrowding and characteristic untidiness. And what of London itself in those times? The unlovely side of Dublin had its contrast. The Irish Parliament still assembled there, the nobility and gentry made use of their town-houses, and the metropolis was a fashionable city in which a good deal of money was spent. Its shops were some of the finest in the world. The Guilds had their procession days when people were kept in spirits by traditional shows; the equipages of the Lord Mayor and Sheriffs were hardly surpassed. The Mansion House was looked up to; distinguished and aristocratic persons accepted hospitality dispensed within its saloons. Charitable institutions were well supported by resident nobility and gentry, merchants and tradesmen; and science and art were encouraged by the Royal Dublin Society, of which many well-known and distinguished persons were members. Capable men produced fine miniatures and oil portraits, choice silversmiths' work, and worthy craftsmanship of all sorts. And yet, when the Union was imminent, it cannot be denied, many good citizens felt the end was near.

Through Capel Street, soon, as you'll rurally range,
You'll scarce recognise it the same street:
Choice turnips shall grow in your Royal Exchange,
Fine cabbages down along Dame Street.

Wild oats in the College won't want to be tilled,
And hemp in the Four Courts may thrive, Sir;
Your markets, again, shall with muttons be filled:
By St. Patrick, they'll graze there alive, Sir!

After the Union that total decadence of the city Lysaght's playful lines foreshadowed was never verified. Money perhaps became scarcer, but Lady Hardwicke testified (*Two Noble Lives*, Augustus Hare)—“Great wealth does not get a man forward here as in London; the society is small and the individuals proud.” This she said being relieved that there was no mishap or misadventure that could have raised a smile on the saucy faces of Dublin on her visit to Mr. Luke White (from whom Lords Annaly descend), a gentleman who had risen from a humble sphere and amassed, with the fairest fame, a large fortune, and whose name occurs in Mr. Berry's fascinating account

of all the good work of the Royal Dublin Society, a tonic welcome to those who take interest in Ireland. The history of the Society's Art Schools, and especially the School of Architecture, at the end of the eighteenth and commencement of the nineteenth century deserves to be better known in England. Worth noting is the grant by members at a very large meeting held on the 5th March 1767 when a motion for suppressing the School for Figure Drawing (founded 1759) was negatived. £5 was voted in payment for the following books ordered for the use of scholars attending Mr. Thomas Ivory's classes in the Architectural School: Gibbs' *Architecture*, Loudon's *Art of Building*, Hopper's *Architecture*, Halfpenny's *Builders' Assistant*, Price's *British Carpenter*, Jesuit's *Perspective*—certainly not a bewildering list. There are now far too many text-books. A limited supply is no disadvantage when it drives youths to inquire and take trouble in educating themselves. We may think what the grounding for a profession meant when often a boy was rated as captain's servant on the log-books of the Royal Navy to learn seamanship so that in process of time he might pass and receive his certificate for a Lieutenant, when lads entered the Army as Ensigns as early as fourteen or fifteen years of age and soon had to show their qualities to gain the confidence of brother officers and respect of the men. Many kept up their classics, pursued other studies, and gained a fair acquaintance of one or more foreign languages. Downright hard work could not be evaded after the first stepping-stone of influence had started a career. Some architects there were who had been apprenticed, like Ivory, who served as a carpenter and completed his time in Dublin. We can understand apprenticeship to a trade was not for all, but practical knowledge by direct association with work and men was, and had to be, acquired in other ways, supplemented by builders' guide-books. Professor Aitchison used to tell that Laxton's *Builders' Price Book* was one of the books studied in his young days. There have come about many upheavals, and it may be questioned whether, in some respects, the way for young men has not been made too easy, to their own great disadvantage.

Twenty years after that little batch of books had been granted to the Dublin School we hear, from Mr. Berry, of another supply. “As it is of interest to learn the titles of text-books in use at this time [1786], it may be noted that the following were ordered to be purchased for the Architectural Drawing School—viz., Gibbs' *Rules of Architecture*, Sir William Chambers' *Treatise on Architecture*, Palladio's *Works*, Richardson's *Ceilings and Chimney-pieces*.” At this time the School sustained a great loss by the death of Ivory, who had for so many years successfully conducted it.

A subsequent item of interest, under the year 1809, is the report of a committee of Fine Arts (of which James Gandon was a member) on the Drawing Schools, recommending amongst very many other excellent

proposals, that really good pictures by ancient masters should be purchased; that £200 should be spent in furnishing the Ornament and Architectural Schools with good designs and engravings; that the new figure-master be the best possible, and advertised for in England, if necessary; and that boys under 13 be not admitted to the Architectural School. A few paragraphs indicate the scope of work done a little later but still early in the nineteenth century. During the years 1813-19 (inclusive) 314 boys received instruction in the Figure School—a means of improvement for engravers in wood and copper, for herald painters, engravers in cameo and intaglio, die-sinkers, and sculptors. 505 pupils were admitted to the School of Ornament during the same period of seven years, and the course of instruction pursued in it was of incalculable benefit to sculptors in stone, wood, metal, to glass workers, chasers, silversmiths, calico printers, pattern-drawers, paper-stainers, embroiderers, jewellers, fancy-workers, damask, carpet and silk weavers, stucco men, cabinet-makers, upholsterers, and carpenters.

In the year 1818 it was stated that from 30 to 35 pupils attended the School of Architecture each year, and during the time of Henry Aaron Baker, who had served as master for a period of 33 years, "there was not a working tradesman or mechanic in the building line in Dublin and the chief towns of Ireland who, during his apprenticeship, had not received instruction in it. Even the rapid improvement noticeable in shop fronts and the ornamental parts of private houses during the period were attributed to the skill acquired by artisans educated in the School." Baker died in 1836, having guided the School for 49 years, and in 1838 John Papworth, of Dublin, A.R.H.A., was appointed to succeed him. And so we arrive at the commencement of the Victorian era, though Papworth, doubtless, carried forward good tradition.

For some account of artists and other interesting men who were trained in these Schools or connected with them Mr. Berry's book must be consulted. More detailed accounts, with authenticated lists of their works, we get from *The Dictionary of Irish Artists*, by Mr. Walter G. Strickland, an expert in this department as distinguished as Mr. Berry in record work. It is much to be hoped that Mr. Strickland will see his way to publish a fellow *Dictionary of Irish Architects*, etc. In late years in England there has been written expressions of appreciation of the fine public buildings in Dublin, and something has been heard of the lives of the men responsible for them. We have had also the Irish volumes dealing with old Dublin houses, but we should like to know more of the men who had a hand in their erection and decoration. In time we hope here in England to know more about Ireland's art treasures and antiquities—some the very choicest in the United Kingdom. Within easy reach at the moment, Mr. Coffey's scholarly work mentioned at the head of this notice is a store of instruction and information, with excellent illustrations.

HARRY SIRR [F.].

ARCHITECTURAL WORK IN INDIA.

Annual Report on Architectural Work in India for the year 1914-15. By John Begg, F.R.I.B.A., Consulting Architect to the Government of India. Po. Calcutta, 1916.

Mr. Begg mentions that in deference to various disinterested criticisms and in obedience to Government instructions he has introduced into his Report this year a prefatory section giving critical comments on work done and summing up the year's progress. This is a most useful innovation, and it has been done in a very interesting way. The completion of the central block of the Prince of Wales Museum of Western India, Mr. Begg regards as the most important mark of progress which has appeared for many years. A competition for this building was instituted in 1908, open to architects resident in India, to whom were added four selected and invited British architects. The competition was won by a resident architect, Mr. G. Wittet [F] (since appointed Consulting Architect to the Government of Bombay), with a very able design in an adaptation of a phase of Byzantine. Though the planning and general arrangements of this design were universally admitted to be the most suitable of all amongst those submitted, yet so strong a feeling of distaste to the unfamiliar style of the exterior was manifested that it was proposed to reject the design in favour of one of the others. None of these, however, was considered to fulfil the requirements so well in point of planning, nor to be capable of construction without considerably greater expenditure. Eventually it was decided to retain the chosen plan, the elevations to be remodelled in a style based on indigenous work, an example of such a style of design being seen in the new Bombay General Post Office then approaching completion. Mr. Begg describes it as a highly successful piece of work and specially interesting for the admirable way in which forms and architectonic ideas of indigenous character have been employed without sacrifice either of its modernness and suitability to its purpose or of its consonance with the true spirit of Indian work. It is living work, and no experiment in antiquarian revivalism, no counterfeit of antiquity, but a model of what an Indian modern public building should be.

Not the least interesting feature of the building (says Mr. Begg) is the treatment of the interior. It furnishes a complete answer to the many opponents of the indigenous manner of design who have been accustomed, while admitting the opportunities for picturesque exterior handling afforded by the style, to maintain that it is impossible to carry a consistent treatment into the interior in view of the complicated and utilitarian (and necessarily Western) requirements of modern life there to be met with. There you must, they would say, allow Western forms to prevail, and so the consistency of your style treatment is lost. But here we have the thing done without loss of consistency, without an undue Westernising of the details, and (though this may be an example of the art that conceals art) without apparent effort. The architect is to be congratulated on the result, and those also may be proud who can justly claim any share in the pioneer work of helping to build up a manner of modern design that has led to such result. In fact, with the completion of this building this particular school of design may be considered as having established itself, and as having done a notable service to Indian art by demonstrating

the possibility of the existence of a living modern Indian architectural style inspired by the work of the past, and employing the still living indigenous tradition, evolved on the soil of India amid the stress of modern requirements and conditions and in full recognition of modern methods of construction and building administration.

In the case of the Post Office inspiration was drawn chiefly from Bijapur in the Deccan. In the Museum the style has been enriched by extending the field of study to Ahmedabad and Champanir in Gujerat. There has also been contributed to it in this instance matter not unworthy to be studied along with the work of all three. There is no reason why, by a further extension of the methods employed, and in response to the varied requirements of modern life, this school of design should not yield even better results in the future, and should not continue to demonstrate its possibilities of infinite variety and charm.

Judging from the two exterior and two interior views of the Museum which are among the twenty-two plates that accompany the Report, Mr. Begg's commendation is well justified. He has also words of praise for the lay-out plan of the new Capital at Patna, for which Mr. J. F. Munnings [A.], Consulting Architect to the Government of Bihar and Orissa, is responsible. The main feature of the lay-out is a Central Avenue 200 feet wide, running almost due east and west, terminating before Government House in a circus and parking ground. It is about a mile long between Government House and the Secretariat, which buildings close the two vistas. Through the capital runs the old bed of the Sone River which, with the levels of the surrounding country, more or less fixed the form the lay-out must take. All the curved roads follow the natural contours of the site, and none have dead ends. The main roads are 150 feet wide, the service roads 60 feet; along the latter all water, drainage pipes and lighting poles and wires will be placed. A reproduction of the plan is given, and it is fully described in Mr. Munnings's Report which is included in the volume.

Mr. Begg points out that during the past few years there have been certain very decided signs of progress all over India. The greater attention to finish which the architect has induced has led to a marked improvement in the quality of the ordinary building brick. The wrong uses of pointing, incorrect and slovenly jointing of stonework, and the many sins of the brush in paint and colour wash, all show a tendency to disappear. As for architecture itself, Mr. Begg says:

The greater extent to which the architect is consulted, and his growing hold on the work of government in the country, are attested to by the increase in the number of architects in Government employ which a few years has shown. I came to India in 1901 as the first qualified—that is, architect-trained—architect in Government service. The list I give in this Report gives the names of twenty-two architects now in Government service. Of these 75 per cent. have been brought out during the past five years. So that the quantity of work of a certain high standard that is put out annually is very much in excess of what it has ever been before. As to the quality there is no doubt that the standard is every year being pushed higher. For this we must look to the individual buildings, and in so far as I have been responsible for a large number of these, I am here faced with a task of some delicacy. But let me take two buildings both by other men than myself—

and each an example of diametrically opposed schools of thought, as they are also of widely different types of construction—the Temporary Secretariat at Delhi, and the Prince of Wales Museum at Bombay. These, each in its own way, represent high-water marks of architectural design.

Among the illustrations is a view of an interesting reinforced concrete bridge at East Baigul, United Provinces. It is not an architect's work, and it finds a place in the Report, Mr. Begg says, "because of its extreme and uncompromising plainness. In spite of its plainness, nay because of it, it attains a certain measure of unquestionable beauty. It has no feature or detail that is not introduced for a definite purpose or that is not the outcome of necessities of construction or use, and so it comes nearer to the highest ideal of architectural art than many a work covered with 'mouldings, features, and ornaments' and full of 'architectural pretensions.' Its artistic merits may be somewhat unpremeditated and unconscious, but they are none the less positive."

Included in the volume are the Reports of the following Consulting Architects to the various Provincial Governments:—Mr. G. Wittet [F.] (Bombay); Mr. E. Montague Thomas [F.] (Madras); Mr. Henry A. Crouch [F.] (Bengal); Mr. E. J. Pullar [F.] (Burma); Mr. Frank Lishman [F.] (United Provinces); Mr. Joseph F. Munnings [A.] (Bihar and Orissa); and Mr. B. M. Sullivan [A.] (Punjab).

The Work of William Burges.

Mrs. J. Wentworth Watson, niece of the late William Burges, A.R.A., has presented to the Institute, through Mr. R. A. Briggs [F.], a further collection of examples of her uncle's work. They consist of original drawings bound up in a large portfolio, and include designs for wall-papers and painted mural decoration, cartoons for stained glass, designs for furniture, and a series of highly finished anatomical studies, human and animal. Altogether it is a very interesting collection, and affords striking evidence of Burges' powers of decorative design. Members visiting the Library should not fail to inspect them.

Books Received.

- History of the Society of Dilettanti. Compiled by Lionel Cust, M.A., and edited by Sir Sidney Colvin, M.A. Printed for the Society. Reissued with Supplementary Chapter, &c. La. 8s. Lond. 1914. 25s. net. (Macmillan & Co., Ltd.)
- The Relation of Sculpture to Architecture. By T. P. Bennett, A.R.I.B.A. So. Cantab. 1915. 15s. net. (Cambridge University Press.)
- School Sanatoria and Infirmarys. By Keith D. Young [F.]. Reprinted from *School Hygiene*. Pamph. 8s. Lond. 1915. (Adlard & Son, Bartholomew Close, E.C.)
- The Sequel to Catholic Emancipation: the Story of the English Catholics continued down to the re-establishment of their Hierarchy in 1850. (With chapters on the influence of Augustus Welby Pugin.) By the Right Rev. Monsignor Bernard Ward, F.R.Hist.Soc. 2 vols. So. Lond. 1915. 21s. (Longmans, Green & Co., 39 Paternoster Row.)
- The Village Church. By the Rev. P. H. Ditchfield. With 15 Illustrations. So. Lond. 1915. 5s. net. (Methuen & Co., 34 Essex Street, W.C.)
- Lines and Contents: Their Nature, Manufacture, and Use. An Elementary Treatise. By Ernest A. Lancaster, B.Sc. So. Lond. 1916. (Gosby, Lockwood & Son, 7 Stationers' Hall Court.)



LEONARD JOHN FINNING (*Associate*).
Sergeant, 24th Bn. 6th Australian Infantry Brigade.
Killed in action (see p. 172).



TOPHAM BRECHER DABRIDGECOURT HOUGH
(*Probationer*).
2nd Lieut., 8th East Yorkshire Regiment.
Killed in action (see p. 172).



DENIS H. WALKER (*Student*).
Captain, 5th Bn. A.P.W.O. Yorkshire
Regiment.
Died of wounds (see p. 141).



9 CONDUIT STREET, LONDON, W., 18th March 1916.

CHRONICLE.

R.I.B.A. Record of Honour.

Killed in Action.

FINNING, LEONARD JOHN [*Associate*], Sergeant, 24th Bn. 6th Australian Infantry Brigade. Killed in action in Gallipoli on 4th October.

Sergeant Leonard J. Finning was the only son of Mr. John Finning, of Exton, Pinhoe, Exeter. He was educated at Hale School, and served his articles with Messrs. Commin, Son, & Bolley, of Exeter. He studied at the Royal Albert Memorial University College, Exeter, and under Mr. G. A. T. Middleton for the Intermediate Examination in 1907, and Messrs. Bond & Batley for the Final in 1911. In 1907 he went to Australia, where he worked for a time in the office of Messrs. Oakden & Ballantyne, and returned to England for the Final Examination in 1911. After his election as Associate he went to the United States to gain further experience, and subsequently returned to Melbourne, entering again the office of Messrs. Oakden & Ballantyne as chief assistant. On the outbreak of war he joined the infantry brigade and quickly gained his sergeant's stripes. Captain Parkes, the commanding officer of his company, in a letter of condolence to Mr. John Finning, says: "His death was a very great shock to myself and my brother officers and men. . . . Your son was respected by us all; so much did the late commander of our company and myself think of him that we had recommended his promotion to the rank of Second Lieutenant, and were daily expecting to hear it confirmed."

HOUGH, TOPHAM BECHER DABRIDGECOURT [*Probationer*], 2nd Lieut., 8th East Yorkshire Regiment. Killed in France on 18th January, aged 18 years and 9 months.

Second Lieut. Hough was the only child of Mr. and Mrs. Topham Hough Hough, of 65 Tennyson Avenue, Bridlington. He was educated at the Bridlington Grammar School, where he won several prizes for art. Intended for the architectural profession, he passed the R.I.B.A. Preliminary Examination and was registered Probationer in July 1914. It had been arranged for him to serve his articles with Mr. John Bilson [F.]. He had been an active member of the Officers' Training Corps of his school, and being gazetted 2nd Lieutenant shortly after war broke out he was posted to the 8th East Yorkshire Regiment, and in December 1914 he passed the Examination qualifying for Lieutenant's rank. He left for France on the 6th October 1915, and had been employed in the trenches and on sapping and mining work. His Colonel writes:—"During the time he has been with us he has gained the respect and confidence of all he has come in contact with, and I feel that I shall be unable to find another to quite make up the loss his men feel at the death of their platoon commander." Second Lieut. Hough was a kinsman of Major John Pickard Becher, D.S.O., and Lieut. H. O. D. Becher, both of whom have fallen in the war.

The Council and Standing Committees: Prolongation of Office.

The question of retaining the present Council and Standing Committees in office for another year, in order to avoid holding the usual elections whilst so many members are absent serving with the Forces, was brought up for the consideration of the General Body at a Special General Meeting held on Monday, the 13th inst. Before effect can be given to the proposal, if agreed to by the General Body, the sanction of the Privy Council has to be obtained to the suspension of the By-laws governing the elections, and the Meeting was asked to authorise the Council to take the necessary steps to obtain such sanction. By-law 67 requires a quorum of at least forty Fellows to decide a question of this kind, and this number was well exceeded, there being fully fifty present when the vote was taken.

Mr. H. D. SEARLES-WOOD [F.], Chairman of the Finance and House Committee, who was called upon by the President to move the resolution on behalf of the Council, reminded the meeting that there were no controversial questions before the Institute, and the Council were pledged not to deal with such matters during the war. He urged the desirability of suspending the elections principally on the ground of economy. As Chairman of the Finance Committee, he assured the meeting that it was becoming increasingly necessary to exercise economy. The elections would cost over £60, and it was desirable to save this sum if possible. Again, nearly 600 members were serving with the Forces, and there was no certainty of getting the election papers into their hands. Mr. Searles-Wood went on to say that the Finance Committee were exercising every possible economy. It had been decided not to go to the expense of printing the KALENDAR for 1916-17, but to issue instead a Supplement to the current KALENDAR, giving the names of new members, changes of address, and necessary information about the meetings, &c. A further economy would be effected by holding one Examination only instead of two during the current year. Mr. Searles-Wood then moved the following resolution:—"That in accordance with the provisions of Clause 33 of the Charter application be made to the Privy Council to sanction the suspension of the By-laws governing the Annual Election of the Council, the Standing Committees, and the Hon. Auditors, so that the Council, the Standing Committees, and the Hon. Auditors elected in June 1915 shall remain in office until the 30th June 1917."

Mr. A. W. S. CROSS [F.], *Past Vice-President*, in seconding the resolution, said that Mr. Searles-Wood had put before them very cogent reasons for not holding the elections this year.

In reply to Mr. BERNARD DICKSEE [F.] the SECRETARY referred to By-law 27, and stated that the term "Council" in the resolution included the President, Vice-Presidents, and Hon. Secretary.

The resolution was carried unanimously.

Charing Cross Bridge.

The South-Eastern and London, Chatham, and Dover Railway's Bill was read a second time in the House of Lords on the 8th March.

EARL BEAUCHAMP moved an instruction to the Committee on the Bill to take into consideration the traffic requirements at this point of the river and the effect that this Bill, if passed, would have upon them, and to hear evidence from the Royal Institute of British Architects, the London Society, and others on the treatment generally of this very important part of London.

The EARL OF DONOUGHMORE said he understood that the noble lord opposite, who was in close touch with the railway company, would not object to the instruction in a slightly different form. An instruction to a Committee of the House of Lords was most unusual; they had not had one carried for ten years. If the words "traffic requirements at this point of the river" were omitted, and words were inserted to show that the Committee should take into account the effect of the Bill upon "the general appearance of the river," he would not oppose it.

VISCOUNT CHILSTON said he was quite ready to agree to the instruction if the proposed amendment was made. It would give the Royal Institute of British Architects and the London Society the right to be heard. The bridges the railway company already had power to build would be a greater impediment to river traffic than would be caused by the strengthening of the existing bridge to enable it to carry to the full extent the traffic necessary in ordinary circumstances. The railway company admitted that the existing bridge was unsightly. They would be glad to see it removed, but, after all, they were not philanthropists; they were practical people, and they were not prepared to build a new bridge merely to meet the views of people with aesthetic tastes.

The MARQUESS OF CREWE said the question of the improvement of the appearance of the river at that point was one of supreme importance, and he rejoiced that evidence of the kind suggested would be admitted.

There was some discussion upon the difficulty of finding a form of words which would meet Earl Beauchamp's wish to include traffic in the instruction, and the debate was ultimately adjourned.

Honours for the President.

The Committee of the Athenæum Club, under the rule which empowers the annual election of a certain number of persons "of distinguished eminence in Science, Literature, the Arts, or for Public Services," have elected the following:—The Rev. Ernest William Barnes, M.A., Sc.D., F.R.S., Master of the Temple; Mr. Ernest Newton, A.R.A., President R.I.B.A.; and Professor Thomas Frederick Tout, F.B.A., Professor of Mediæval and Ecclesiastical History in the Victoria University of Manchester.

Business Preparation Classes for Substitutes for Men on War Service.

We are asked to announce that these classes have been established by the London County Council at the request of the Clerical and Commercial Employments Committee of the Home Office for the purpose of preparing educated young women as substitutes for men who have been withdrawn from clerical and commer-

cial occupations for service with His Majesty's Forces. It is hoped by means of the classes to organise a systematic supply of substitutes to fill the gaps which will occur as men are called up in their groups under Lord Derby's scheme. The instruction is divided into courses applicable to the general requirements of a business house and to the particular requirements of routine work in banks, and municipal, insurance, railway, or shipping offices. In view of the short period covered by the courses (three weeks), and of the scope of the instruction provided, every care is taken in selecting candidates for admission to courses, and no candidate is accepted until it has been ascertained by personal interview that such candidate would be likely to prove satisfactory after training. At the conclusion of each course the knowledge of the candidates is tested by means of an examination, and those candidates who pass the test are awarded a certificate showing that they have satisfactorily completed the course for which they have been admitted. About 1,000 candidates have been accepted for courses of instruction. Of this number over 650 have satisfactorily completed courses and have been awarded certificates of proficiency. The demand of employers for substitutes has been such that it is anticipated that the supply of trained substitutes will be speedily exhausted. Among the appointments which have been secured by students who have passed through the courses are: Government offices, 50; Municipal offices, 25; Insurance offices, 120; Railway offices, 25; general commercial houses, 151. The demand is rapidly increasing—300 vacancies in railway and insurance offices having been notified to one training centre alone—and will, no doubt, be greatly accentuated as the groups are called up under Lord Derby's scheme. Classes have already been organised at the City of London College, White Street, Moorfields, E.C.; Goldsmiths' College, Lewisham High Road, New Cross, S.E.; Fulham Training College, Finlay Street, Fulham Palace Road, S.W.; Pitman's School, Southampton Row, W.C.; St. George's College, Red Lion Square, W.C. For information concerning the classes, communications should be addressed to the Education Offices, Room 149, L.C.C. Education Offices, Victoria Embankment, W.C.

After-the-War Problems.

The question of the settlement of discharged sailors and soldiers upon the land, which is recommended by the recent Departmental Committee's Report, will be dealt with at the Annual Meeting of the Garden Cities and Town Planning Association, which will be held at the Mansion House on Wednesday afternoon, 22nd March. The Lord Mayor will preside, and among those taking part will be the Marquis of Salisbury, the President of the Association, and the Earl of Selborne, the President of the Board of Agriculture, who will deal with the proposals in the Report. It is also hoped that a prominent sailor and soldier will speak from the point of view of the Services. The

formation of Garden Villages, with the idea of a more general distribution of the population upon the soil, has been one of the chief aims of the Association since its foundation, and at the outbreak of war a special committee was at work with the idea of establishing a small holdings colony. The Association has offered its assistance to the Board of Agriculture in regard to the proposals, and the experience which has been gained in the development of the estates which have been developed will doubtless be of assistance.

Art through the Emancipation of the Workman.

At the concluding function of the Sixth Annual Convention of the American Federation of Arts, the following message to the Convention was read from Mr. Ralph Adams Cram [*Hon. Corr. M.*]:—

"The War is the great revealer, the great awakener, and when once the contest is settled, and settled right, there can only come a demand for art such as has not been witnessed for centuries.

"I do not think the importance of the part the craftsman and the workman must bear in this new art revelation can be over-estimated. One fatal element in such art as we have acquired during the epoch that has succeeded the Renaissance is the unwholesome and pernicious theory that art is a question solely of design and of individual expression. So long as this heresy is held there can be no art, for art in itself is essentially communal, and its content is furnished by a society that is at one with itself.

"Again, there never has been and there never can be any period of great art where conception and production are severed one from the other. So long as the artist is a man apart, the workman or the craftsman an accessory (or, as has so frequently happened of late, an accomplice), so long what art we have will be a simulacrum, not a reality.

"In my own art of architecture I have come to realise of late how little actual design has to do with the excellence of a building, how much, actually, workmanship and execution have to do with its excellence. If the man who conceives a general ideal of a building is unable, as of course he is, to put it in visible and material form, then those to whom is entrusted this work must be, in a very real sense, his *alter ego*. Between the architect or designer and the workman and craftsman must be a community of sympathy and interest so complete that the result is almost identical. I do not care how great an architect is; I do not care how striking and convincing his conceptions may be when they are shown in the two dimensions of paper and pencil, if these are not worked out under an equally artistic impulse and through an equally artistic ambition on the part of the workman, then the building is itself, and will for ever remain, a failure; while, on the other hand, given a group of enthusiastic and conscientious workmen labouring under just and stimulating conditions, I am prepared to guarantee that the simplest design may be made into a thing of enduring beauty.

"The problem before us to-day is not so much the further and progressive education of the architect, as it is the emancipation of the craftsman and the workman from the bonds in which they now are held. These bonds are, speaking categorically, first, that attitude of the architect and the general public which presupposes that the workman is merely a blind and unintelligent tool; that all design of whatever sort must emanate from an architect and his draughtsman, and that the manual labour involved in stone-cutting, joinery, and metal work is a thing to be left under the direction and control of a general contractor; and second, the mistaken attitude of many labour unions, which to-day discourage emulation amongst their members or any tendency to rise above the dead level of mediocrity, and the further effort to eliminate altogether the apprentice system, together with the allied principle that all a man has to do is to work for a constantly decreasing number of hours for a constantly increasing pay, regardless of the quality of work he produces.

"Between the trades unions of to-day and the guild of the Middle Ages there lies a deep gulf, for in the latter case the guild not only looked out for the individual interests of all its members, but it also guaranteed a certain standard of work, and this the highest of which the men were capable. If the architects on the one hand and the unions on the other, with an intelligent public opinion vitalising both, can come to a point of realising the absolute identity of interest between both parties and the vast importance of good workmanship, not only to the carrying out of a work of art, but to the raising of the intellectual and moral standard of the workman, then a new future will dawn for art in all its forms.

"Of late we ourselves have been making several experiments in this direction. We are to-day building one church where we are giving to the workmen a latitude that is probably unheard of in recent times. We are stimulating their sense of initiative, arousing their pride in execution, and the results are nothing short of amazing. We find that we can take the most indifferent and uninterested workmen—English, Scotch, Italian, German, American—and by appealing to their pride in work and their joy in creative labour, obtain from them workmanship as good as any ever produced in the best eras of the past. I am persuaded, therefore, that those who claim that the standards of labour have so degenerated during the past centuries, that confidence and responsibility can no longer be placed in the man, are speaking without foundation, and I know now beyond possibility of contradiction or question, that the common stone-masons, joiners, plasterers, metal-workers, are not only glad and ready to assume new responsibilities and achieve new standards, but that they are as capable of doing this as they ever were in the past.

"This is the one point that I hope to emphasise, and I urge its consideration on every member of the American Federation of Arts, for this new principle

(which is also the oldest in history) is also the principle of a great federation, and after more than a quarter of a century of practical experience in at least one branch of art, I am finally and definitely persuaded that only by such federation, only by such community of interests and emphasising of personality, shall we ever be able to produce again art comparable with that of the past and capable of adequately expressing the new ideals in religion and philosophy and life that must be the issue of the present cataclysmal war, and that in themselves are the only foundation on which can be built a great and enduring fabric of art expression."

The Landscape Architect's Calling.

A Department of Landscape Architecture has recently been established at Ohio State University. Touching upon the qualifications essential to success in this field of art, the prospectus of the new Department says: "The prospective student should not be misled into believing that anyone who is fond of the Out-of-doors and who appreciates Nature can necessarily become a proficient landscape architect. If such were the case, almost everyone would qualify. It must be remembered that this is primarily an art closely related to architecture and painting, the difference being chiefly in the medium of expression. One who has the essential qualification of taste, but is not able or willing to study thoroughly into the engineering and mathematical problems so intimately associated with all large landscape operations, is usually doomed to fail. It is a peculiar art in this respect, very much like architecture, which concerns itself not only with form, colour, and composition, but with the strength of materials, stresses and practical problems of construction. The student should consider well before deciding on a career in which the competition is constantly increasing, and for which he is not naturally adapted. The object of this announcement is not primarily to advertise a new Department, but to give a clear appreciation of the field and the special requirements necessary for successful practice."

Registration of Architects in America.

By authority of the Board of Regents of the State of New York, the State Board for the Registration of Architects have instituted a competition for the purpose of securing a design for a Registered Architect's Certificate of a character and artistic quality worthy of the profession. The competition is open to all architects, draughtsmen or other designers, resident or doing work in New York State. The certificate, which is to be designed for reproduction from an engraved steel plate and printed on parchment, is headed "University of the State of New York, Board of Regents," and goes on: "Be it known that..... has given satisfactory evidence that he has the qualifications required by law, and is hereby authorised to employ in the State of New York, the title of 'Architect.'" The seal and signatures of the State Board follow and the words: "In witness whereof the Regents grant this certificate, No....., under seal

of the University." The competition will be assessed by a jury of seven, and four prizes are offered—first, \$200; second, \$150; third, \$100; fourth, \$50. The Bill for the Registration of Architects passed both Houses of the Legislature, and became law in the State of New York on the 5th May 1915.

The Brothers Adam.

Messrs. Batsford, Ltd., announce the forthcoming publication of an important work entitled *Robert Adam and His Brothers: Their Lives, Work and Influence on Architecture, Decoration, and Furniture*, by John Swarbrick [A.]. No adequate record has yet been made of the Adams' lives and work. Mr. Swarbrick has devoted a large amount of careful research to the subject, having visited most of the work of the Adams in various parts of the country. Most of the illustrations are from photographs taken under his supervision by well-known architectural photographers. The aim of the book is to show a representative selection of their best work. Full sets of illustrations will be given of the interiors of certain well-known houses not hitherto illustrated, as they have been generally inaccessible. These include Syon House, Isleworth; Harewood House, Yorkshire; Kedleston House, Derbyshire; Lansdowne House, Berkeley Square; Kew Wood, Highgate; No. 20 St. James's Square, once the town house of the Williams-Wynn family; Stratford House; No. 20 Portman Square, and many others. The views include exteriors and interiors, with such decorative features and details as chimney-pieces, ceilings, wall-treatments, doors, door-fittings, medallions, mirrors, ironwork, grates; also pieces of furniture and designs for clocks, harpsichords, brackets, sedan chairs, and marquetry, reproduced from executed examples or the artists' original designs. The illustrations, 220 in number, include a series of fine collotypes, some being double-page plates. The book is quarto in size, bound in art linen; price two guineas net.

The English Chancel.

The Oxford University Press will publish shortly another volume by Mr. Francis Bond (*Hon.A.*) in the "English Church Art" series entitled *The English Chancel*. For the first time a detailed history is given of the English altar and its successor, the Communion Table; also of the seventeenth-century controversies by which altar rails were introduced, and placed sometimes on all four sides of the table, sometimes on three sides, and finally on the west side only. With this is incorporated an account of the various forms of the English reredos and other accessories of the altar. Then comes a description of the piscina in both its forms, the credence shelf, and the sedilia. The existing examples of the Easter sepulchres are illustrated, and the remarkable ritual of Passiontide is described. On no member of the English mediæval Church was such consummate art expended as on the sedilia and piscina, and these and the other contents of the English chancel are very fully illustrated.

The Civic Survey's Guide to London.

The Civic Survey of Greater London, now working in the Galleries of the Royal Institute of British Architects, 9 Conduit Street, W., has prepared for the National Council of the Y.M.C.A. a large-scale map of London, which is to be posted up in every Y.M.C.A. centre at home and abroad, and at the principal stations and prominent points in the streets, to supply soldiers and sailors with all the information they require in getting from the railway terminus where they detrain to their place of call, or to places of general interest. The map not only shows the principal thoroughfares and railway stations and routes, as well as the Underground railways, but marks clearly the Y.M.C.A. centres (where soldiers and sailors are sure of finding accommodation), officers' clubs, Dominion and Oversea Clubs, soldiers' and sailors' clubs, baths, etc. The map will show at once the nearest way by road or rail to various points of interest.

Chadwick Public Lectures.

A course of three lectures on the "Domestic Arterial System in relation to Comfort and Health" is in course of delivery by Dr. Charles Porter, Medical Officer of Health, Marylebone, at the Household and Social Science Department, King's College for Women, Campden Hill Road, W., on Wednesdays, 15th, 22nd, and 29th March, 1916. Lecture I. dealt with Drains and Drainage; Lecture II. will deal with Water Supply, and Lecture III. with Heating and Light. The lectures are illustrated by diagrams and lantern slides. Admission free. Miss Rosamund Shields, the Warden, presides at next week's lecture, and Mr. John Slater [F.] on the 29th.

MINUTES.

At a Special General Meeting held Monday, 13th March 1916, at 4.30 p.m.—Present: Mr. Ernest Newton, A.R.A., *President*, in the Chair; Mr. E. Guy Dawber, *Hon. Secretary*; 50 Fellows, and 2 Associates—the Minutes of the Special and Business Meetings held 28th February 1916, having been published in the JOURNAL, were taken as read and signed as correct.

The *Hon. Secretary* announced that Sergeant Leonard John Finning [*Associate*], of the 24th Battalion 6th Australian Infantry Brigade, was killed in action in Gallipoli on the 4th October, and it was resolved that the deep regrets of the Institute for his loss be entered on the Minutes and that a message of sympathy and condolence be forwarded to his relatives.

The decease was also announced of George William Watson, of Melbourne, *Associate*, elected 1880; and Harry Edwin Rider, *Licentiate*.

The *President* explained that the Meeting was called to consider a proposal submitted by the Council that the present Council and Standing Committees shall remain in office for another year in order to avoid holding an election whilst several hundred members are absent serving with the Forces.

On the motion of Mr. H. D. Searles Wood [F.], seconded by Mr. A. W. S. Cross [F.], it was thereupon

RESOLVED, unanimously, that, in accordance with the provisions of Clause 33 of the Charter, application be made to the Privy Council to sanction the suspension of the By-laws governing the Annual Election of the Council, the Standing Committees, and the *Hon. Auditors*, so

that the Council, the Standing Committees, and the *Hon. Auditors* elected in June 1915, shall remain in office until the 30th June 1917.

The proceedings then closed, and the Meeting separated at 4.50 p.m.

NOTICES.

A SPECIAL GENERAL MEETING will be held on Monday, 27th March, 1916, at 4.30 p.m., to confirm the Resolution passed at the Special General Meeting of the 13th March—viz.:—

"That in accordance with the provisions of Clause 33 of the Charter, application be made to the Privy Council to sanction the suspension of the By-Laws governing the Annual Election of the Council, the Standing Committees, and the *Hon. Auditors*, so that the Council, the Standing Committees, and the *Hon. Auditors* elected in June 1915, shall remain in office until the 30th June, 1917."

On View in the Common Room.

Drawings for Subject XXV.: (a) A Small Public Library; (b) A Municipal Gymnasium: a series of Alternative Problems in Design submitted by candidates for the R.I.B.A. Final Examination. The drawings will be on view all next week.

The Examinations: Intermediate, Final and Special.

The Council give notice that these Examinations will be held once only this year, the Intermediate from the 2nd to the 9th June; the Final and Special from the 22nd to the 30th June.

Applications, with Testimonies of Study, &c., for the Intermediate must be sent in by the 15th April; for the Final and Special by the 6th May.

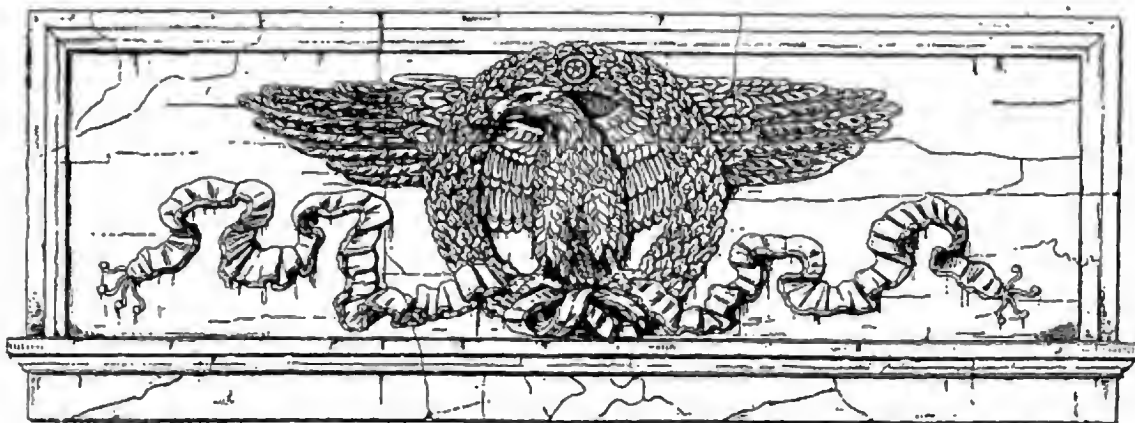
Discontinuance of the Preliminary Examination.

The Preliminary Examination for the registration of candidates as Probationers will be discontinued.

Candidates for Probationership will for the future be required to submit certain certificates, full particulars of which were given in the last number of the JOURNAL, and to be obtained on application to the Secretary R.I.B.A.

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THE CIVIC SURVEY.

By C. HARRISON TOWNSEND [F.], Assistant Director, Civic Survey of Greater London.

A SURVEY on the lines I propose very briefly to describe deals with a town or city and its immediately outlying districts, and is naturally known as "Civic"; but the same kind of work could equally well concern itself with a neighbourhood mostly of a rural character. In this way it might embrace the consideration of a whole county, or even a group of counties, irrespective of any particular town or city centre, where the words "Regional Survey" seem best fitted to define the scope of the undertaking. What, however, at the present time is being more widely and particularly discussed is the *Civic Survey*, and it is the object and purpose of this that I hope to advocate, and to explain its scope and methods.

First, then, what is a Civic Survey? Secondly, why is it desirable—if not, indeed, necessary—to form one? And, lastly, granting the premises of its great utility, how is it prepared, and by what machinery brought into being?

In January last year the Professional Classes Sub-Committee of the Government Committee for the Prevention of Distress submitted to the Board of Education a scheme which had been prepared by the Architects' War Committee, in conjunction with other bodies. This, to quote their Report, had been drafted with a view to "employing, in a manner calculated to be of great service to the community, the energies of professional men who have lost their work owing to the War." They suggested that this end could best be attained by the organisation in various centres of the Kingdom of a series of Civic Surveys. They proceeded to give an explanation of what is meant by the term, followed by a general sketch or outline of the ground covered by such an undertaking.

According to the Sub-Committee's definition Civic Survey work consists in "collecting and recording, in an easily accessible manner, such data in respect of any city or inhabited area as are required in order to attain a complete knowledge of the whole of those interests upon the preservation or enhancement of which depends the welfare of the inhabitants." These facts and data cover the whole ground of a city's life and activities—its methods of governance, its manufacturing and residential conditions, its work and recreation, its health generally and diseases, its traffic and its climatic conditions. Particulars giving full information on these and many other necessary points are recorded, and it is this record that constitutes a Civic Survey.

The method by which this collected information can best be set forth is, without doubt, by means of diagrams. It is a commonplace that all statistics and figures "leap to the eye" and inform the enquirer far more rapidly in diagrammatic form than when presented in page after page of wearisome columns of figures, and it is astonishing to any but the preparer of diagrams to realise how many

seemingly unlikely subjects become amenable to this method, and, thanks to it, are presented to the student with simplicity and clearness.

In this way, then, would be set down, as constituting a Civic Survey, facts which, though perhaps at hand and not of themselves difficult to amass, have not hitherto been collected and presented in a form easy for reference and comparison. Again, by the same system of diagrams would be conveyed information hidden away from all but the few in Blue-books and Parliamentary Returns, or obtainable only upon making special visits to consult the documents of various local authorities, or which is waiting the investigation of the visitor at Somerset House or some other Government Department. This would be collected and made easy of comprehension to the enquirer by the help of graphic charts or diagrams.

So much for a broad and general outline of what constitutes a Civic Survey. But it may be well to point out here—and to emphasise—what it is not. It does *not* offer suggestions as to the development of any particular district, nor does it indicate schemes of amelioration of existing social conditions. Again, in many cases, it may be determined that it is not to include a consideration of antiquarian or archaeological data, which have, as a matter of fact, most frequently been collected by other bodies existing for that purpose. The Survey neither dwells on things of the past, nor indulges in dreams or projects of the future, but its work is to present the facts of to-day of such a nature, and presented in such a shape, as to be of the utmost assistance to the student of the city as it is.

Starting, then, from the point that it is an ordered record of the corporate interests of a city, it should only be set in hand on the conviction of its manifest and supreme desirability—if not, indeed, its necessity. We ought to satisfy ourselves as to *why* a Civic Survey should come into existence.

In a wide and general sense “such a record stimulates the individual citizen to take a wider interest in his city as a whole,” and makes him aware of those assets of which he has a right to boast, and at the same time brings home to him, by direct and comparative means, the defects in its existing arrangements which it is either wise or necessary to rectify. Thus, for instance, there may be in the air a suggestion for the improvement of the city—say, by the extension of its boundaries—giving occasion for the consideration, as a new problem, of this added area, and of its most effective treatment. Or it may be, again, that it is proposed to modify the internal and central arrangement of the city, and to re-plan and reconstruct its thoroughfares and open spaces, so as to add to its convenience for civic life, and to increase those amenities of which the citizen should be proud. In either of these cases the Survey would be of invaluable service. It would enable the technical adviser proposing to carry out improvements, either in town or outlying districts, to have at hand all the necessary data for the preparation of the scheme. This information would be full, and recognised as official, and would provide material equally serviceable not only for those responsible for the original proposals, but also for those criticising these, and offering other suggestions or alternatives. Its facts would be at the service of all, and—a point of much importance—they would have been collected and recorded by a body possessing the recognised authority to make the investigations. Thus the work would not have been made difficult by the refusal of facilities on the part of unfriendly and unwilling officials, or by the suspicion of private property-owners. Again, gathered, as the data would be, at a time when no immediate proposal as to the possible acquisition of land was under consideration, the element of speculation on a rising value of the property affected would be eliminated. That this is a very real danger is within the experience of anyone who has had to do with schemes of town development. It is always to be found that one has no idea of the extraordinarily high value of a property till the town surveyor appears on the scene to survey it with a view to a scheme of town improvement.

As to what further would be learnt from the Survey—the standard by which its importance and usefulness are to be measured—the list is a long one. It would give, in special diagram, particulars of the existing open spaces, and show the sufficiency or otherwise of their provision in the light of the greater or less needs of the neighbourhood, and would be a basis for considering additions to their size

and number. The enquirer interested in the subject of town traffic would be able to see how well or ill the question was met, and would find recorded the provision of travelling facilities by railway, tram or motor-bus, with the number of passengers, and the amount of goods carried by each system. The Survey would show, on a number of other diagrams, how, in various districts of the city, the need was met for public baths, or for free libraries, or for places of recreation, or for schools, and would help to the consideration of whether their provision was in proportion to the number and needs of the inhabitants of a certain district.

To the investigator of social conditions various diagrams would indicate, by tints, the density of population in various areas, either manufacturing or residential in their nature, and would make plain the extent to which congestion and poverty and various diseases co-exist. Such statistics as those gathered by Mr. Charles Booth with infinite labour and at his own individual expense, and set forth in his monumental work on the poverty of London, would be prepared by properly instructed investigators, and presented, not by columns of figures, but by the more easily realised method of the rest of the Survey.

In this way, also, for the pathologist and physiologist would be provided information of high value. For them the geological formation of the land and the latter's utilisation, and the altitudes above sea level, would be given, as being of high value in their bearing upon the birth and death rates. The meteorological conditions, and their relation to deaths from various diseases, would be set forth by means of charts, showing, by a well-devised system, the rainfall, the prevailing winds, the duration of sunshine the barometric and thermometric records, etc. The prevalence, again, in a given area of a particular disease, and the extent to which the development of the district—by a system of drainage, for example—can lead to its decrease, would be recorded. Finally, in connection with this group of questions, diagrams would show at a glance the returns of population, and of births and deaths, which now have to be studied in that very quagmire of figures, the Census records and the statistics of the Registrar-General.

Holding an important place amongst these graphic records would be a series dealing with the forms and areas of governance of the city and the districts at its fringe. This would show their division into Civic or Borough, Urban or Rural Districts and Poor-law Unions, with the populations and other particulars of these, and would include diagram information of the Police Districts and the various Police Courts and County Courts. In addition, the Water, Gas and Electric Power systems, and the Fire Brigade Stations and their Calls would also be separately indicated.

If we look upon an area of land as capable, for purpose of illustration, of being discussed in terms of physiology we might say that—taking its geological formation (what is called "Solid Geology") as the bone structure, and the overlying features, the "Drift Geology," as the muscular and fleshy covering—the epidermis may well find an equivalent in the utilisation of the land-surface of this particular area. The traffic arrangements, in their turn, may be considered as finding their analogy in that wonderful system of arteries and veins the efficient working of which is an absolute essential to the life of the organism. This important side of civic life is beginning to be properly considered, and it is being recognised how large a bearing it has on the development of the city. Especially is this so in respect of those whose daily occupation lies within its business or manufacturing centre, and the ease or difficulty of their access to the fringe of suburbs or semi-rural districts in which they have their homes. A detailed statement of the systems of railways, tramways and motor-bus routes, and the extent to which they are severally used, forms a necessary and useful part of any thoroughly treated Civic Survey.

As to the ultimate destination of this collection of varied civic information, this is for each centre to decide upon for itself. The Professional Classes Sub-Committee, whom I have already quoted, suggest holding, at a central municipal building, an exhibition of these diagrams of so much interest to the citizen. The further proposal is that they should form a principal exhibit in that Civic Museum

which is advocated by Mr. H. V. Lanchester and others as a greatly to be desired feature in every town and city. Failing this, the Survey would, I imagine, be housed in the town hall or public library, or in some other place easy of access, where it would be properly indexed and catalogued, waiting the enquiry of the civic student.

With regard to our own Civic Survey of Greater London, in the initiation of so new an enterprise, and for devising methods and a system for its effective carrying out, much time and consideration were given by those earliest concerned in it to preliminary enquiries and consideration. It is felt that the result will be of use to those engaged in a similar undertaking in other parts of the kingdom, and that a body of precedents has been collected which will lighten their work.

If the formation of Civic Surveys is a movement at present only in its infancy, but, as is to be hoped, one destined to be of wide extension, it is evident that the usefulness of these various records would be largely increased by working, wherever possible, along the lines of a scheme framed upon a basis common to all. This principle would involve an agreed uniformity, so far as circumstances allow, with regard to the ground covered by the Survey, the system adopted for collecting the facts and information, and—very particularly—the methods used for recording and displaying them. Those concerned in preparing the Civic Survey of Greater London—the first undertaking of the kind—have, in scheming-out their work, been careful to bear in mind the need and usefulness of such a co-ordination, and it is much to be desired that it will also be an admitted principle in all other civic centres.

STRATFORD PLACE.

By ARTHUR T. BOLTON [F.], F.S.A.

[By the kind permission of *Country Life*, the copyright illustrations and this article are reproduced from the issue of 4th March 1916, with additional technical details and facts throwing light on the design and history of this famous Place.]

STRATFORD PLACE is by tradition so strongly associated with the brothers Adam that it is with something of a shock that those interested will learn that evidence in proof is hard to discover. The fact that no sketch or drawing relating to this work is known to exist at the Soane Museum, in the great mass of the Adam drawings, is not of itself by any means conclusive if other evidence could be obtained.

Before describing No. 3 Stratford Place in particular—some interiors of which are now illustrated—it will be as well to give the generally accepted account of the origin of this fine building scheme: "Stratford Place was laid out in 1773 by Robert Adam for the Hon. Edward Stratford, who four years later succeeded his father as Earl of Aldborough. He was born in 1736, and in 1774 he was elected M.P. for Taunton. That he was a man of various attainments is shown by his election as F.R.S., and Hon. D.C.L. in 1777.

"His talents had been made the most of by a literary education on which he seemed to value himself." His *Essay on the true interest of the Empire*, maintaining that England would benefit by the loss of the American colonies, was noticed by Walpole as 'a foolish and contemptible pamphlet.'

"He had married, in 1765, Barbara, only daughter and heiress of the Hon. Nicolas Herbert, of Great Glemham, Suffolk. His wife's money invested in estates in England enabled him to buy land north of Oxford

Street and lay out Stratford Place with a fine house for himself at the upper end. This was Aldborough House, afterwards Stratford House, and now Derby House.

"His Countess died in 1785, and the Earl then let the house, but marrying another heiress two years later he was enabled to build a further house for himself at the side, and to complete the range of buildings. The second wife was Elizabeth, only daughter of Sir John Henniker, Bart. Lord Aldborough built Aldborough House, Dublin, between 1796-8, but it was unfinished at his death in 1801. Previously in 1775 he had founded the town of Stratford-upon-Avon in Ireland, building 400 stone houses with a church and chapel.

"On the Countess's death in 1802 the London estates went to the Earl's nephew, the Hon. John Wingfield, son of Viscount Powerscourt, who assumed the name of Stratford. He lived many years in Stratford Place."

The above is the substance of the account given by the Georgian Society of Dublin in their account of Aldborough House, Dublin.

Glemham, the home of the first heiress, is in the neighbourhood of Bury St. Edmunds and of Great Saxham, where Robert Adam had friends and had carried out work. Apart from this rather slender point there is no apparent authority for the statement that Robert Adam laid out Stratford Place.

There are two plans bearing on our subject in the Crace Collection at the British Museum, both tracings of originals. One of them, a general outline, is endorsed, "This is supposed to be a plan of 1772 before the buildings were erected," and bears a further note: "Copy of Mr. Lister's plan which he says was taken before the Aire Brook was covered in June 3rd, 1779." The other plan is to a larger scale and is signed "Jas. Feltham, June 2, 1779." It shows Earl Poulet's house on the west side (now No. 19 and a club), with vacant plots on either side. Lord Newhaven is marked to the north and the Earl of Yarborough to the south, the latter having the frontage to Oxford Street. This second plan appears to have been made to show the sewerage arrangements.

The City Authorities have kindly allowed me to see the original lease and documents relating to this property, and I am now able to give the authentic history of Stratford Place.

The original petition, seeking a lease of the land, came before the Common Council, 5th June 1771, and was referred to a Committee.

The original contract was signed 20th November 1771, while the actual lease is dated 12th May 1772. The Hon. Edward Stratford, of Dean Street, Soho, eldest son and heir-apparent of Lord Baltinglass in Ireland, contracts with the City, in consideration with all convenient speed to erect good new substantial dwelling houses, and other buildings of brick and stone, of such extent, elevation, form, and manner of



STRATFORD PLACE.

As is well known, Stratford Place was built on land belonging to the City Corporation. On it were conduit heads or reservoirs in which were collected water from the numerous springs in the locality for the supply of the City conduits. On the occasions of their periodical inspections the Lord Mayor and Corporation used to dine at the Banqueting House on the site. This building, together with the conduits, is shown on a site plan, also in the Crace Collection, a survey made by J. Peacock for George Dance and dated 5th May 1772. James Peacock of the Guildhall in 1785 was the author of an anonymous little work called *Oikidia or Nutshells*, which contains an amusing skit on Adam's style. The houses in Stratford Place are let upon Corporation leases, which being perpetually renewable are commonly regarded as equivalent to freeholds.

finishing as are described on two drawings, or designs, deposited in the office of the Comptroller, and signed by him, and shall and will lay out the full of £40,000 in erecting the same.

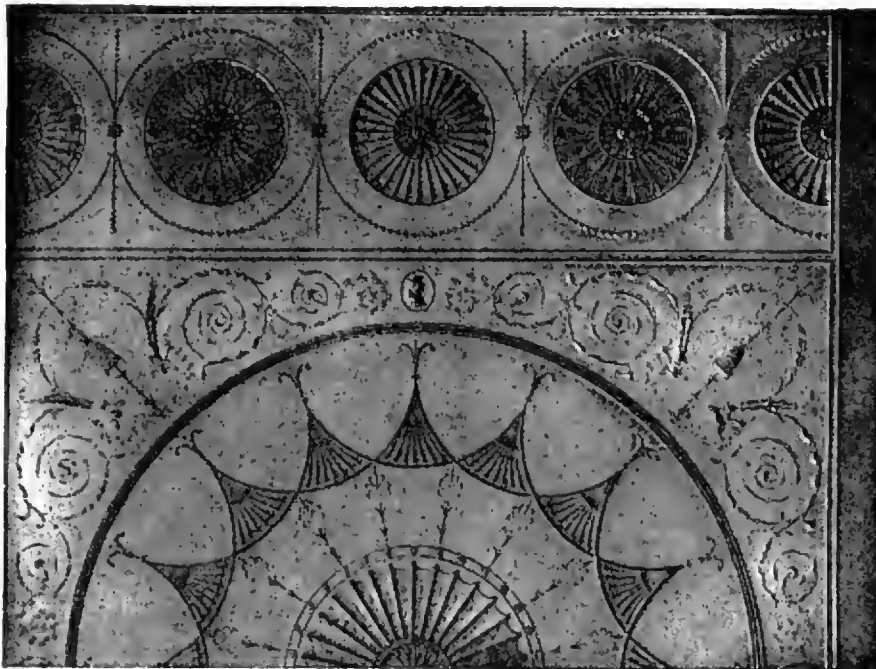
By a petition of 11th March 1772 the Hon. Edward Stratford states that he "has in pursuance of his grant entered into treaties with Sir Thos. Edwards, Mr. Pepys, and the Commissioners of the Streets for purchasing, renting, or exchanging ground as shall be agreed on, in order to enlarge and square the angles of the site, for which Heads of a Bill are preparing for Parliamentary sanction."

"That he had several plans of the whole and particular parts taken in order to see which is most likely to succeed, which plans are to be exhibited for public approbation at the opening of the Royal Academy,

George Dance, Junior, 5th May 1772. There is a stipulation in the lease that the said buildings shall be for the time being. The lease, perpetually renewable, was for sixty-one years, wanting eleven days, the first



BACK DRAWING ROOM CEILING, NO. 3 STRATFORD PLACE.



FRONT DRAWING-ROOM CEILING, NO. 3 STRATFORD PLACE.

subject to the approbation of the Committee, and under the inspection of the Clerk of the City's Works two years being at a peppercorn, the remainder, fifty-nine years, at £160 per annum, with a fine at each re-

newal, every fourteen years, of five years' ground rent, i.e., £800.

A petition of July 1773 from Stratford and his tenants confirms the names given on the plan for six of the houses on the lower eastern side. Stephen Sayre, it appears, was a Sheriff. There are two names in the list, Daniel Barnes and George George, which are not on the plan. This petition re-

manner of that age, was that Stratford, on signing the contract with the Comptroller, placed £20 in the box for the poor.

The first plan, that of the entire estate now illustrated, is naturally the most interesting. It shows the site of the large house at the end as belonging to Sir George Yonge and M. Selbye, Esq. At the extreme point the odd balance of the site is marked "ground to improve the houses in Wigmore Street."

To a copy of this plan I have added, under the original names given, those of the occupants, or owners, as they appear in the first edition of *Boyle's Court Guide*, that of 1792. It will be noticed that in the square at the upper end of Stratford Place four houses have been built on either side, instead of only three as first intended, and shown on the early plan. The present owner of No. 3 has very kindly allowed me to make plans of that house, which will give an excellent idea of the size and distribution of the rooms, and of the general character of the planning throughout.

By this period Robert Adam had already been at work in London for fifteen years, and imitators had sprung up and were much in evidence. The Adelphi had been started in 1768, and had attracted immense attention by its misfortunes as much as by its merits. It was an object lesson in estate development of a public character. It may be recalled that in 1771 the City had engaged in a sharp contest with the Adam brothers on the subject of the river frontage of the Adelphi; a special Act of Parliament was passed despite their formal protest deciding the question in favour of the latter. The general idea of the design of the great house at the end of Stratford Place, however, is that of Lansdowne House, which was in hand at least as early as 1765-6.

Stratford Place as laid out represented, till within memory, the achievement of a completely symmetrical plan, extending from Oxford Street back to the main house, which closed the vista in a monumental fashion.

There are two brick gateway piers crowned by lions at the entrance, and originally there were railings and gates across the street. The

eastern block facing Oxford Street was some years ago replaced by a modern bank in red granite and stone. Fortunately, it is not now intended to repeat this block on the other side; but in a necessary rebuilding of the western block the old design, materials, and details are to be followed.

The low wings of what is now Derby House, once of a single storey, were raised at a later period to a double colonnade, and again a few years ago this characteristic and valuable feature of the scheme was entirely obliterated by further extensions. Otherwise the



FIREPLACE IN FRONT DRAWING-ROOM, NO. 8 STRATFORD PLACE.

lated to the drainage difficulties of a site so full of springs.

In 1774 there was an inspection, when the Committee saw several houses and found them not conformable to the said drawings. Stratford, while admitting that to be the case, said that they were superior, and produced drawings showing the finish intended.

Probably in 1776 the first block of houses were all completed, as there are no entries in the Journals of that year, nor any subsequent record of any further inspection. An interesting incident of the grand

general distribution of the Place remains the same. As an instance of a complete piece of town planning of the eighteenth century, it is almost unique in London.

As we have seen, the lower part of the eastern side of Stratford Place was first built, and displays more brickwork and less stucco than on the western side, as is evident in the ground floor arcades. The houses in the square followed later; but there has been a good deal of alteration at this end, a fact which adds to the difficulty of following out the actual development of the scheme.

The house illustrated, No. 3 on the eastern side, has, as will be seen by the plans, Adam-like characteristics in general idea, but the detail of the planning is not personal to him.

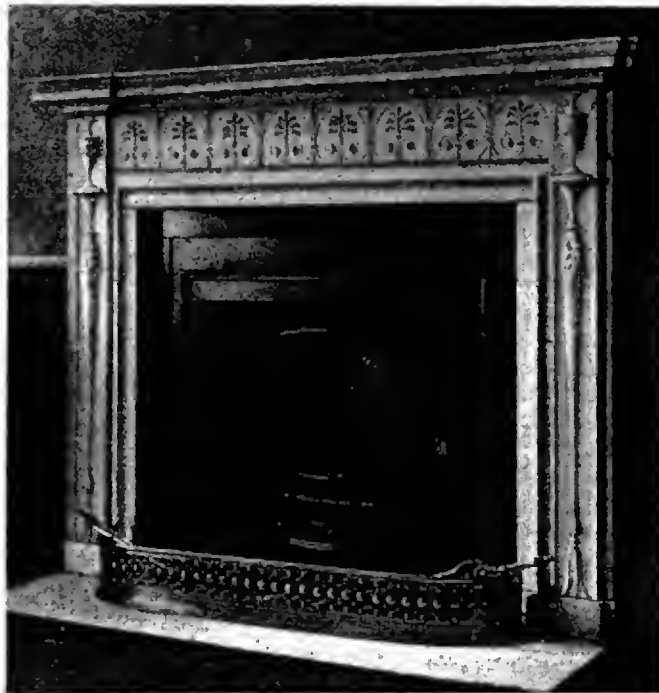
In the Hall we miss the Adam lead fanlights. In the "Eating Room" the Ionic capitals of the columns are somewhat clumsy in profile, and the ceiling and frieze do not show Adam's peculiar gift of a perfect distribution of ornament. On the first floor the notable first drawing-room has a marble mantel rather of the Wyatt type, while the intersected treatment of the ceiling is again not personal to Adam. The arrangement of the doors is a point to be noted. Rising in height nearly 9 feet for the door between front and back rooms, at the corresponding door to the staircase that same high level for the doorhead is only obtained by means of a dummy. It is rare for Adam to exceed the usual scale for a six-panel door. The same remarks apply to the back ceiling and mantelpiece, which are good examples

of work in Adam's manner, "Adamitic," as Walpole calls it, rather than Adam in style.

The fine pierced steel fender in the front drawing-room comes by direct pedigree from Mrs. Montagu's great house, and may therefore have been designed by James Stuart.

The Octagon Room is well contrived; it has a plain ceiling and a cornice, the latter profiled with a hollow, which is not at all Adam-like. The fine mahogany doors with some of the original mountings are a feature of the house. The metal handrailing of the staircase is rather of the earlier type.

On the other side of Stratford Place the corner house (No. 16) raises less doubts. The mantelpieces of inlaid marbles do not resemble Adam's own work, and there are features in the plasterwork which are certainly not his. It is quite possible that the plasterers and others had a wider range at Stratford Place than would be the case on Adam's own buildings. Robert was exceptional for his age in the minute care he bestowed on such matters, and for his prodigal powers of invention. The general impression left by Stratford Place is that it was set out on lines which Adam had invented and established, and that his style of decorative finish was also followed with considerable fidelity. But on close examination the work shows itself as that of followers, rather than of Robert Adam himself. It is perhaps a tribute to the Hon. Edward Stratford and Richard Edwin that their work has so often, and so persistently, been ascribed to Robert Adam.



FIREPLACE IN BACK DRAWING-ROOM, NO. 3 STRATFORD PLACE.

REVIEWS.

HOSPITAL CONSTRUCTION.

Construction, Equipment and Management of a General Hospital. By Donald J. Mackintosh, M.V.O., M.B., LL.D., F.R.S.E. Roy. 8o. 1916. Price 15s. net. [Wm. Hodge & Co., Edinburgh and London.]

At no time in the history of our country has the demand for hospital accommodation been so great as at present. In order to cope with the large number of disabled and wounded men returning from the seat of war it has been necessary to erect hospital accommodation in all parts of the country, and unfortunately, it is to be feared, the limit has not yet been reached. It is true these buildings, or at all events the majority of them, are more or less of a temporary character; nevertheless it is essential that they should be so planned and equipped as to give the best results, both from the hygienic and medical points of view, and administered so as to secure the utmost economy, consistent with efficiency. The timely issue, therefore, of the new and revised edition of this excellent work is most welcome.

The author has for many years made a special study of the planning and arrangement of hospitals, and his long experience as Superintendent in one of the largest general hospitals in the country has enabled him to treat the subject in a manner which will appeal strongly to the architect engaged in hospital planning and construction.

The importance of economy in management and administration is duly emphasised, and the author's views thereon will be found to be of considerable value to all those entrusted with the management of hospitals, particularly in these times when every year sees the cost of administration and upkeep expanding, while the income is stationary, and in many cases shrinking.

A commendable feature of the work is the method and arrangement adopted in describing the various parts of the hospital. Beginning with the admission block to a general hospital, the reader is led into the building, so to speak, and conducted in progressive stages from unit to unit, by which means he becomes conversant with the everyday work of a hospital, and an intelligent idea is conveyed of the relationship one department bears to another.

In the opening chapter, the importance of the admission block is set out and its purposes defined. It is here that patients of all kinds are received and examined, and thereafter transferred to the wards suitable for each particular case. The author deprecates a makeshift arrangement for this department, as is sometimes done by placing it in the basement or in any other available space which conveniently offers itself.

The admission block may either form part of the main building or be erected as a separate structure. In the latter case, it is desirable that it should be

connected to the main building either with a covered way or subway. The planning and general arrangements of this block are described at length, and many small, though important details, which are too frequently passed over, but which make for the comfort of the patient and the efficiency of the establishment, are referred to and explained.

Two typical plans of admission blocks are given, together with several photographic prints of the interior showing the fittings and equipment, all of which are very fully described in the text. These plans show, in addition to the admission department, accommodation known as emergency wards. These are provided for noisy or intoxicated patients, and being in a detached building, the wards in the main hospital are prevented from being disturbed.

The author deals very fully with the duties of the staff and administration of this department, and the procedure to be adopted in dealing with patients brought in, or who present themselves for admission. Various forms of "records" for use in the admission block are given, by means of which a complete record of the daily work treated in the department is duly registered.

The medical and surgical ward units are dealt with at considerable length. Every ward in a hospital is accompanied by a group of smaller apartments which together with the main ward make up the unit. Each of the smaller apartments is designed for a specific purpose, and serves its particular function in the working of the unit; its position in the plan is therefore important. The function and purpose of each room are carefully explained, and its special arrangement and equipment are entered into with considerable detail.

The necessity for a "Return Patients' Room" is duly emphasised as forming an essential part of the unit. Patients who have left the hospital, but whose cases require examination and attention for some time after, return to the hospital for this purpose. It is not desirable that such patients should be placed in the beds of the main wards simply for examination, hence the importance of setting apart a room for this special purpose. It is recommended that a bath be provided in conjunction with this room, so that patients who have just come from their homes can, if necessary, be bathed previous to being examined.

With regard to the patients' bathrooms attached to the main wards, the author advocates the placing of these at the entrance end of the ward, instead of, as in many hospitals, in one of the sanitary towers at the extreme end of the ward. Opinion seems to vary on this point. Both positions have their advantages and disadvantages. With the bath in the former position it is possible to bathe the patient before he enters the ward, although in many cases the condition of the patient will not permit of this being done. On the other hand, when the bath is situated in the sanitary tower patients do not require to pass into

the working corridor of the unit every time a bath is required, and it allows of the piping for water supply and wastes being more concentrated and simplified.

Matters such as windows, doors, wall linings, and floor materials, are dealt with in a practical manner, and throughout the text there are numerous illustrations showing the fitting up of the various apartments, while two clearly drawn plans, to a good scale, are given, showing the arrangement of the medical and surgical ward units respectively.

The sanitary towers are important adjuncts to every ward. In the plans illustrated these project at an angle of 45 degrees, with a balcony of ample width extended between. In one tower are placed the sanitary fittings for patients, while the other contains nurses' washhand basin and bed-pan washer and rack, the practical arrangement of the latter being shown by a photographic reproduction.

Dealing with floor space, the author points out that a hospital with a medical school attached requires a greater area per bed than a hospital without such a school, for the reason that in the former the major part of the clinical instruction is given in the wards, hence the additional floor space is desirable. In a teaching school the minimum cubic feet per bed should be 2,000, with a minimum floor area of 150 square feet per bed.

On the surgical side the necessity of providing an operating theatre for each surgical ward unit in large hospitals is dealt with, and the operating theatre itself and its equipment are explained at considerable length. The construction and equipment are clearly shown in a series of photo reproductions, as well as by a plan drawn to scale. The theatre illustrated is designed for teaching purposes, and shows a gallery for students, in horseshoe form. The staging and seating of the gallery are cleverly arranged so that students can enter or leave the theatre without disturbing the operating area. The studied severity of all details is very marked, and imparts an exceedingly smart and businesslike appearance to the apartment.

Numerous illustrations of fittings for theatres, sterilising apparatus, and other equipment of the most modern and approved type are given.

The artificial lighting of an operating theatre requires special attention, and the author points out the undesirability of having any fitting hanging directly over the operating table. All fittings should be at the side, with adjustable reflectors, and should be wired from two distinct and separate supplies, with automatic control, so that in the event of one supply failing the other is automatically and instantaneously switched on. Where separate supplies are not available a battery should be provided as a stand-by. The necessity for such an arrangement in an operating theatre is obvious.

The special units dealing with diseases of the throat and nose, gynaecology, burns and septic cases are described, as also the methods of administration

in connection with the nursing and ward maids' staff.

As regards the resident medical officer, the author has strong leanings to the arrangement which provides that officer with a suite of apartments directly connected with the ward unit under his charge, in preference to that where the accommodation for the resident staff is centralised, and states at considerable length the advantages and disadvantages of the two schemes. As the particular arrangement adopted materially affects the entire plan of the hospital, it is important that it should be considered and decided from the commencement of the lay-out. The author undoubtedly makes out a very strong case for the accommodation being contained in the ward unit, not only from the resident's point of view, but also from that of the hospital itself.

Here he has the strictest privacy. He has facilities for work when not required in his wards. There is no unnecessary intrusion upon, or unwelcome interruption of, his studies. His apartments are to all intents and purposes his home. He can see his friends in his own sitting room, and when he wishes the company of his colleagues he can obtain this either in the common dining room or billiard room, or by making arrangements for visitation. This is entirely under his own control. The benefit to the hospital is even greater. The main object in having a medical officer in residence is that the services of a qualified medical man, familiar with the details of each case, shall be available at the shortest notice. . . . Where the resident's quarters are within the unit he is always on the spot when a critical case is under his care, and yet need not hang about the wards awaiting developments.

The outpatients' department, hospital kitchen, laundry and washhouse, nurses' home, are all fully dealt with and described in detail.

Chapter XII. is devoted to the construction of hospitals of a semi-permanent nature, and has been contributed by Mr. John Wilson, F.R.I.B.A., Architectural Inspector of the Local Government Board for Scotland. This chapter gives much valuable information as regards selection of site, methods of construction, and materials to be used in buildings of a temporary nature, and the data and information given will be found to be of considerable service to those engaged in the designing of buildings of this description.

The concluding chapter deals with the provision for nervous diseases and incipient mental diseases. The author outlines in a general way the nature and curative treatment of these diseases, and describes the type of plan and arrangements found to be most suitable for the special treatment of such cases.

In addition to the plans already referred to, the appendix contains several excellent lithographic plates showing plans of an outpatients' department, hospital laundry, and nurses' home, all to a good scale and clearly drawn.

The text is well printed, and the numerous excellent illustrations add materially to the value of the book. The entire work has been ably conceived, and is lucid and thorough; it is undoubtedly the most practical and useful work on hospital planning and

construction we have, and is well worthy the careful study of all architects entrusted with the designing of such buildings.

JAMES MILLER [F.], A.R.S.A.

Glasgow.

REINFORCED CONCRETE CONSTRUCTION.

L.C.C. Regulations relating to Reinforced Concrete. With Explanatory Notes by Ewart S. Andrews, B.Sc. Eng., M.C.I. 70 pp., cr. 8o. Lond. 1916. Price 2s. 6d. net. [B. T. Batesford, Ltd., 94 High Holborn, W.C.]

The Regulations made by the London County Council with respect to the construction of buildings wholly or partly of reinforced concrete after allowance by the Local Government Board, came into force on the 1st January last, so that this publication is timely. The Regulations have been several years in preparation, and now the War and its after-effects may be expected to retard experience of their operation in practice, though if the Regulations fulfil the purpose which they are intended to serve of enabling advantage to be taken of the useful qualities of reinforced concrete construction, it may prove that the need for rigid economy which the War has brought will encourage its use as against other and older methods of construction. The relief given is a real one, for the Regulations will enable the erection of structures of lesser weight, of greater floor area, and of superior day-lighting. That is to say, the walls can be reduced in thickness even to 4 inches, while the window openings can be increased from one-half to two-thirds of the wall area: though why even this last limit should be set is not apparent, as owing to the walls being merely panels there is no constructional necessity for any limit, and, seeing that day-light is so important in city buildings, it seems a pity to impose unnecessary restrictions. Fire resistance can hardly be the reason, for we have means of protection by metal glazing and automatic rolling shutters. It is surmised that the limitation arises from some mistaken zeal as to æsthetic treatment following upon some resolution as to areas of openings in walls suggested by the International Congress of Architects in years gone by, which ideas have long since been realised to be fatuous by architects of discernment. It seems regrettable that we who need light to add to the efficiency of our office and factory buildings, and have been taught by medical science the hygienic value of sunlight, should be prevented by official regulations from producing buildings as light and graceful as many of the famous examples of Gothic architecture of the Middle Ages.

The Regulations for Reinforced Concrete are the most scientific production we have yet had in Britain in the way of building law and will require considerable engineering skill to interpret them in practice. Mr. Andrews' notes will therefore be all the more valuable. One would like him to go more into detail, though the manner in which he has managed to make himself clear in a few words is remarkable.

The purpose of criticism should be to add something useful, and therefore a few discrepancies are pointed

out instead of merely repeating what the author has well said or lauding what well deserves praise.

On p. 41, under items 14 and 15, the reference should be to Regulations 42 and 43, while as regards item 18 Mr. Andrews' interpretation is very likely correct, though the writer would prefer to interpret it only to mean that concentrated loads may be considered as distributed over the larger area as demonstrated by Mr. Andrews, but that this should only affect the calculation of the bending moments—namely, by distributing the load on a greater portion of the span—and should not determine the moment of resistance in slabs which would be derived from a much greater breadth, as has been disclosed by tests.

The diagram on p. 44 has the words "long" and "short" transposed in the side margins.

On p. 47 Mr. Andrews remarks that the term "web" of a beam is not quite clear. His explanation, it is thought, is the right one.

On p. 48, in demonstrating the effect of haunching in reducing the headroom, Mr. Andrews is not quite fair to the regulation, because he has not deducted the width of the pillar, nor need he put a splay at more than 30 degrees.

It is to be regretted that Mr. Andrews is not more careful in respect to symbols and notation. In the Regulations it is expressly defined that Q represents "qualifier," yet on p. 50 the author irrationally calls it "the resistance modulus." He might as well talk of b as the width and d as the height. Again, on p. 56, whereas the Regulations define b as the breadth of the slab acting as the flange of a tee-beam, Mr. Andrews unnecessarily imports the symbol b , without explanation. Sometimes, too, he uses the regulation B for "bending moment" and at other times $B.M.$

The numerical example on p. 60 contains a slip in working in respect to the computation of the safe bending moment where 60 should be 48, which affects the result.

Mr. Andrews makes the remark at the end of p. 64 that the Regulations reward us for our trouble in calculating the radius of gyration. That is only so when a large percentage of vortical reinforcement is employed; in most ordinary calculations, unfortunately, they do the reverse.

An index, which is not the official one, is included at the end, and it is only necessary to remark that the writer thinks both the author's and the official indices exhibit plenty of room for improvement.

Mr. Andrews has included a number of diagrams to facilitate calculations, and his notes should prove distinctly valuable to architects in enabling them to check designs and generally keep an observant eye upon the work of the specialist designer.

H. KEMPTON DYSON.

Books Received.

The History and Evolution of the Dome in Persia. By K. A. C. Creswell. Reprinted from the *Indian Antiquary*. 4o. Bombay 1915. [British India Press, Margason, Bombay.]



9 CONDUIT STREET, LONDON, W., 1st April 1915.

CHRONICLE.

R.I.B.A. Record of Honour: Twenty-sixth List.

Killed in Action.

PHILLIPS, LOUIS AUGUSTUS [*Associate*], Sergeant, Public Schools and Universities Bn., Royal Fusiliers. Killed in action in France on 14th March.

Sergeant Phillips served his articles with Messrs. Habershon and Fawcner, architects, of Lempert and Cardiff, and was afterwards assistant to Mr. John F. Groves [*F.*], architect to the Tredegar Estate, Newport, Mon. He was elected Associate and started practice in 1907. He was a fine all-round athlete, but will be remembered best as a Rugby Football international player. He represented Wales against England and Ireland in 1900 and against Scotland in 1900-1. Taking up golf he won the Welsh Amateur Championship at Porthcawl in 1912. He was also a Welsh international water-polo player.

Award for Distinguished Conduct.

SOWERBY, FRANK DOUGLAS [*Student*], 2nd Lieut., 4th Hussars, has been awarded the Cross of Chevalier of the Legion of Honour for distinguished conduct in action.

Serving with the Forces.

The following is the Twenty-sixth List of Members, Licentiates, and Students R.I.B.A., serving with H.M. Forces, the total to date being 57 Fellows, 423 Associates, 225 Licentiates, and 271 Students:—

FELLOWS.

Pollard, Arthur: Major, 5th Bn. West Yorks Regt.
Roberts, Haydn P.: Artists' O.T.C. Engineering Section.

ASSOCIATES.

Clark, W. Llewellyn: 2nd Lieut. Royal Flying Corps.
Gibbon, B. R.: 3rd Bn. Northumberland Fusiliers.
Osborne, Frank J.: Artists' Rifles O.T.C.
Owen, Geoffrey: Cadet, 2nd Artists' Rifles O.T.C.
Ranton, Percy T.: Lieut., Reserve of Officers.

LICENTIATES.

Farrow, J. W. H.: 2nd Regt. South African Infantry.
Foster, W. T. B.: Lieut., Staff for R.E. Services.
Highmoor, S. G.: 2nd Lieut., 21st Bn. Durham Light Infantry.
Mettham, J. A.: Lieut., R.E.
Samson, H. O.: Lieut., Territorial Force Reserve.

STUDENTS.

Aitchison, Harold P. R.: Artists' Rifles.
Stobbs, F. R.: 151st Co. Royal Garrison Artillery.

Promotions.

Mr. H. E. Mathews [*A.*], who as a "Territorial" was called up when war broke out and joined the 5th Bn. Sherwood Foresters, has since been promoted Captain, and now Major, attached to the Headquarters Staff, London.

Mr. H. S. Besant [*A.*], who enlisted in February, 1915, as a Sapper in the Royal Engineers, and after attaining the rank of Sergeant was given a commission as Second Lieutenant in the Special Reserve and attached to the Queen's Own Royal West Kent Regiment, has been transferred to the Royal Engineers.

Mr. James J. S. Naylor [*A.*], of the "A" Battery, H.A.C., has been granted a commission as Sub-Lieutenant, R.N.V.R. Yacht Patrol.

Lieut. A. F. C. Bentley [*Licentiate*] has been promoted to Captain, Commanding 3/1st High. Div. Amm. Col., R.F.A.

Charing Cross Bridge.

In the House of Lords on the 22nd March the adjourned motion for the second reading of the South-Eastern and London, Chatham, and Dover Railway Bill was agreed to.

The EARL OF PLYMOUTH moved an instruction to the Committee to whom the Bill will be referred to take into consideration the requirements of the traffic over the river at Charing Cross and the effect which the Bill will have upon them, and to hear evidence from the Royal Institute of British Architects, the London Society, and others on the treatment generally of the very important part of London affected.

VISCOUNT CHILSTON, on behalf of the promoters of the Bill, said they would welcome any assistance which could be given them in beautifying the structure. He pointed out that the present bridge was for railway and foot passenger traffic only, and suggested that to authorise the construction of a bridge for traffic of all kinds would be beyond the scope of the measure.—Instruction agreed to.

Proposed Central Organisation of Trade Interests.

Sir John Burnet, R.S.A., *Vice-President*, and Mr. E. Guy Dawber, *Hon. Secretary*, were appointed by the Council to act as representatives of the R.I.B.A. at a meeting held under the auspices of the Institute of Industry at the Savoy Hotel on the 30th March, to consider suggestions put forward by Sir Edward Carson for the creation of a strong Central Organisation of Trade Interests.

Postponement of R.I.B.A. Prizes and Studentships 1917.

On the recommendation of the Board of Architectural Education, the Council have postponed the Competitions for the R.I.B.A. Prizes and Studentships 1917. Candidates who under the age limit were eligible in 1915 and 1916 will be considered eligible to take part in these Competitions when they are next held.

Architects and the Public.

A campaign of enlightenment regarding the value of an architect's services, and his proper relation to the public, is being carried on by the American Institute of Architects and its branches in all sections of the United States. The Iowa Chapter has been particularly active. Among other educational methods

employed by this body is "A Circular of Information and Suggestion," now in its fourth edition and distributed among persons interested in building operations. This document contains a brief outline of what are termed vital elements in connection with all building activities. It explains the architect's functions and status as a professional man, and discusses the considerations that should properly influence a client in his selection of an architect. The unwisdom of conducting a competition under any but special conditions is made clear, and the method of procedure when a competition cannot be avoided is also set forth. Advice is given clients regarding the treatment they should accord their architects after engaging them. The architect once selected should be relied upon and should have the employer's complete confidence in order to be in a position to produce the best results. In pointing out the danger of his being misled if the employer accords too great weight to the criticisms and suggestions of well-meaning but aesthetically untrained friends and neighbours, the employer's attention is directed to J. G. Holland's lines:

Can you tell me why
Men with a taste for art in finest forms
Cherish the fancy that they may become,
Or are, Art's masters? You shall see a man
Who never drew a line nor struck an arc
Direct an architect, and spoil his work,
Because, forsooth, he likes a tasteful house!
He likes a muffin, but he does not go
Into his kitchen to instruct his cook;
Nay, that were insult. He admires fine clothes,
But trusts his tailor. Only in those arts
Which issue from creative potencies
Does his conceit engage him.

The circular concludes with a statement of the objects of the American Institute of Architects and an offer by the Iowa Chapter to furnish any desired information or assistance to persons interested in the subjects discussed. Educational matter of this character is published by the Central New York Chapter in the advertisement pages of the local papers.

To Architects on Service Abroad.

Mr. Percy S. Worthington [F.] would be glad to hear from any architects on active service who have made sketches and notes of interest in the countries where they are serving, and would be willing to lend them to show at an Exhibition of drawings of Belgian subjects, proposed to be held at the City Art Gallery, Manchester. Mr. Worthington's address is Lombard Chambers, 46 Brown Street, Manchester.

Chadwick Public Lectures.

A lecture, illustrated by plans and lantern slides, on Emergency Military Hospital Construction will be given by Mr. A. Saxon Snell [F.], on Thursday, 6th April, at 8 p.m., at the Royal Sanitary Institute, 90 Buckingham Palace Road, S.W. The Chair will be taken by Sir Maurice Fitzmaurice. Admission free.

THE LATE ROBERT COCHRANE,

LL.D., I.S.O., F.S.A., F.R.I.B.A.

The death of Dr. Robert Cochrane, which took place at his residence, 17 Highfield Road, Dublin, on 17th ult., in his 71st year, removes one of the most able and respected members of the architectural profession in Ireland. He had been in failing health for a considerable time past, and during the last year had gradually become weaker, though it was not thought that the end was so near.

Dr. Cochrane, who was born in 1846, was the son of the late Hugh W. Cochrane, of County Down, who came of an ancient Scoto-Danish family settled in Ireland in the 17th century. He was married to Ethel Mary Sarah, daughter of George Hawken, a grandson of George Carew, of Llanteglos, Cornwall, who was the eighteenth in direct descent from King Edward I. and Queen Eleanor.

Dr. Cochrane was educated at Queen's College, Belfast, and was articled to the late Henry Smyth, County Surveyor of Down. He practised as an architect until 1874, when he joined the Architectural Department of the Board of Public Works in Ireland. He retired as Principal Surveyor in 1909. For a good many years he was H.M. Inspector of Ancient and National Monuments in Ireland. He was President of the Royal Society of the Antiquaries of Ireland 1912, and President of the Institution of the Civil Engineers of Ireland for two terms, 1904-6, a Vice-President of the Cambrian Archaeological Association, Honorary Corresponding Member of the Numismatic and Antiquarian Society of Philadelphia, Honorary Member of the Isle of Man National Historical Society, Fellow of the Société des Antiquaires du Nord, and a Member of the Council of the Royal Irish Academy. He was Joint Honorary Treasurer of the George Petrie Memorial Fund, and was mainly responsible for the design of the Celtic monument erected over the grave of Petrie, the greatest of Irish antiquaries, in Mount Jerome Cemetery, Dublin. He was a Doctor of Laws, *honoris causa*, of the Royal University of Ireland. He had been a Fellow of the Royal Institute of the Architects of Ireland since 1878. In 1892 he was elected a Fellow of the Royal Institute of British Architects, and retired two years ago.

During his long connection with the Office of Public Works in Ireland, which he entered as Assistant Surveyor, rising to be Principal Surveyor, he became responsible for the design or reconstruction of many important public buildings throughout the country, including the post offices at Belfast and at Lurgan, and for Sections I. and II. of the reconstruction scheme of the General Post Office, Dublin. He was also architect of important and extensive additions to the Queen's College, Belfast. An old member of the Institution of the Civil Engineers of Ireland, he was for many years a member of the Council. He took a very warm interest in the welfare of the institution, which owed much to his long service and wise counsel. Al-

though his practice was of an architectural character, he was chosen as President for two successive terms.

In the relations of his official life he was distinguished by a marked urbanity and kindness, as every architect who was brought into contact with him in connection with building works to be sanctioned by the Board will recall with gratitude. His views and ideas in the matter of the design and building construction of schools, residences, etc., so submitted to him were marked by practical common sense, mingled with a courteous and considerate regard for his professional brethren on whose work he had thus to pass judgment. He was ever ready to be helpful, and to smooth away difficulties arising out of official routine or otherwise.

It is for his valuable labours in connection with Irish antiquities and the study of early and mediæval Irish architecture that he will be best remembered. He was a careful student and frequent writer on these subjects. Amongst his principal publications were:—*The Antiquities of the Western Islands of Scotland*, *The Ecclesiastical Antiquities of Howth*, *The Ancient Monuments of the County of Cork*, and numerous contributions to the *Journal of the Royal Society of Antiquaries, Ireland*, *Archæologia Cambrensis*, and other archaeological, architectural, and scientific publications. His work on the monuments of the County Cork was an effort to initiate a classified scientific record of the ancient remains of each county, after the manner of the "Ordnance Survey Letters," compiled under Sir Thomas Larcom's scheme in connection with the Ordnance Survey of Ireland. Dr. Cochrane had hoped to see this effort form the nucleus of an attempt to do a work now being so admirably performed for England, Scotland and Wales by the Royal Commissions on Ancient Monuments. The advantage of a Royal Commission on these lines has, unfortunately, been denied to Ireland. One of the results which Dr. Cochrane had hoped for from the appointment of a Royal Commission for Ireland was the compilation of a scientific record of all the remains of any importance in the country, the existing lists, though voluminous, being neither accurate nor informative. He was largely instrumental in the preparation of a carefully reasoned case presented to the Government some time ago in support of this object: unfortunately without success.

Dr. Cochrane's series of illustrated annual reports to the Commissioners of Public Works on the Ancient and National Monuments of Ireland are most admirable accounts of his labours in their preservation, and will become indispensable to the student of Irish architecture. He brought to his task the essential qualifications of a trained architect and an antiquary of scholarly attainments. The methods he pursued commended themselves to every Irish antiquary of eminence. It is to be hoped that the work he so successfully carried on may be continued in the same spirit and with the same care and scholarship.

His work on behalf of the Royal Society of Antiquaries of Ireland was of scarcely less importance.

For eighteen years he acted as Honorary Secretary (1889-1907), becoming President in the latter year. At the time of his appointment as Honorary Secretary the Society (which is one of the oldest in the kingdom) had declined in numbers and in influence. With characteristic energy he undertook the task of building it up again, and succeeded so well that when he relinquished the post the society had become numerically the most important antiquarian body in the kingdom and had attained a position of influence higher than it ever before occupied. For many years he acted as Editor of its publications. R. M. BUTLER [F.].

CORRESPONDENCE.

Volunteer Corps: Appeal for Recruits.

4th Battalion Central London Regiment Volunteers,
Chester House, Eccleston Place, S.W.: 18 March 1916.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Now that the Volunteer Corps have secured recognition by the War Office, it is most necessary that their ranks should be augmented as much as possible in order that they may efficiently fill the place which will be assigned to them. I appeal, therefore, through the hospitality of your columns to every active man not at present in the fighting forces of the Crown to join one of the Volunteer Corps for the purpose of assisting in Home Defence and relieving other forces now stationed in England.

Appeal is specially made to (1) Men who have been accepted for clerical work and have been put back; (2) Men over or under military age; (3) Those who may have dropped out at a time when it seemed Recognition might be withheld, and (4) Men rejected for slight physical defects.

From personal experience I can assure the older men that no demands will be made upon them that are not within their powers and that do not make them better men physically and mentally. Lord Roberts so often told us that it is the duty of every fit man to learn to shoot and become efficient in drill, and this can be done in a comparatively short time without interference with business and other duties.

Our Battalion offers excellent facilities for London men, the Headquarters being within a few yards of Victoria Station. We have a fine Drill Hall, lecture room, common room with canteen, rifle range, armoury, etc. In addition to the usual infantry training we offer physical drill, musketry, school of arms, lectures, and practical instruction in field engineering, entrenching, bridging, etc. The Battalion is now engaged at week-ends upon the entrenchments in connection with the Defence of London. Week-end camps are being held and a Battalion camp has been arranged for Easter on the North Downs, near the trenches.

The Battalion Sergt.-Major is at Headquarters every day for the purpose of receiving recruits.—Yours faithfully, EDWIN GREENOP, Hon. Sec.

The Architecture of Robert Adam.

Victoria Mansions, 23 Victoria Street, Westminster, S.W.
To the Editor, JOURNAL R.I.B.A.,—

SIR,—A friend has drawn my attention to the note in your last issue regarding Messrs. Batsford's production of a book on Robert Adam. The prospectus upon which this note is no doubt based would appear to be rather incautiously worded, and negligent of the enterprise, and zeal, with which during the past three years *Country Life* have been illustrating all of those works described as "well-known houses not hitherto illustrated." In all they have published, since April 1913, when Shardeloes, hitherto regarded as Adam's first house, appeared, no fewer than thirty-three articles dealing with Adam work in England and Scotland. Of the works quoted in your list as "unpublished," which are authentic Adam, there are only two in fact which have not yet appeared in their pages. These, together with an amount of matter of which the instalments already given are only a third, are held over for publication in book form, as already announced at the inception of the scheme. While the war is in progress it has been judged impossible to fulfil this promise, but I think it is only due to *Country Life* to recognise the remarkable series of very full illustrations of Adam work both known, and unknown hitherto, which have appeared, and are continuing to appear, in their pages.—Your obedient servant,

ARTHUR T. BOLTON [F.].

ALLIED SOCIETIES.

New Zealand Institute of Architects.

The Annual Report of the Council of the New Zealand Institute of Architects, presented at the Annual Meeting of the Council held 30th November last, states that the membership has increased from 246 in 1914 to 315 in 1915. Twenty-seven members are serving with the Forces. The Council report that, realising the importance of ensuring that in future all architects admitted to the Institute should be well educated, a great amount of consideration has been given to the question of an educational scheme, and of the examinations to which that scheme leads. As an examining body it has laid down a scheme of education and has stated what examinations must be passed in order to qualify for membership. The work of encouraging and developing and carrying out the scheme has to be left in the hands of the various Branches. The scheme is such as any fairly well-educated youth ought to pass after about four years of study. The Council regard this as a minimum, and the hope is expressed that many students will be ambitious enough to work for the degree in Architecture which has been formulated by the University of New Zealand. It is hoped also that one of the University Colleges of New Zealand will see its way in the near future to establish a Chair of Architecture.

A motion that the Institute should donate a portion of its Funds towards a Chair of Architecture was referred to the Finance Committee.

A letter was read from the Director of the Wellington Technical College setting out a syllabus of training and examination which could be given at his College as a full and satisfactory course to qualify for the Institute's Examination.

On the motion of Mr. Hurst Seager [F.], of Canterbury, N.Z., it was resolved, "That the Prime Minister of the Dominion be requested that for the future all important public buildings be made open to public competition under conditions based

upon the gazetted regulations of the Institute." It was further resolved, on Mr. Seager's motion, "That it be regarded as the practice of the Institute for architects to open all tenders, make a list thereof, and communicate them to the client before making the amounts known to the tenderers."

MINUTES.

At a Special General Meeting, held Monday, 27th March, 1916, at 4.30 p.m.—Present: Mr. Ernest Newton, A.R.A., President, in the chair; Mr. E. Guy Dawber, Hon. Secretary, 44 Fellows (including 15 members of the Council), and 5 Associates (including 2 members of the Council)—the Minutes of the Special General Meeting held 13th March having been published were taken as read and signed as correct.

The Hon. Secretary announced that Louis Augustus Phillips, Sergeant in the Public Schools Battalion, Royal Fusiliers, Associate, elected 1907, had been killed in action in France on the 14th March, and it was resolved that the deep regrets of the Institute for his loss be entered on the Minutes, and that a message of sympathy and condolence be forwarded to his near relatives.

The decease was also announced of Frederick William Lacey (Bournemouth), Fellow, elected 1898; Edward John Woods (Adelaide), Fellow, elected 1892; Harry Dawber Holland (Wigan), Associate, elected 1914; and Herbert Sydney Rhodes (Sydney, N.S.W.), Licentiate.

The decease was further announced of Charles Hadfield, elected Associate in 1863, Fellow 1872–1913, Member of Council representing the Sheffield Society of Architects 1895–97; and of Robert Cochrane, LL.D., I.S.O., F.S.A. (Dublin), Fellow 1892–1914; and it was resolved that a vote of sympathy and condolence be passed to their relatives.

The President announced that the Meeting was summoned in accordance with the Charter and By-laws to confirm the Resolution passed at the Special General Meeting of the 13th March—viz. :—

"That, in accordance with the provisions of Clause 33 of the Charter, application be made to the Privy Council to sanction the suspension of the By-laws governing the annual election of the Council, the Standing Committees and the Hon. Auditors, so that the Council, the Standing Committees, and the Hon. Auditors elected in June 1915 shall remain in office until the 30th June 1917."

On the motion of the President, seconded by the Hon. Secretary, it was resolved unanimously that the Resolution be confirmed.

The proceedings terminated at 4.45 p.m.

NOTICES.

Licentiates and the Fellowship.

The next Examination of Licentiates desiring to qualify for candidature as Fellows will take place in July. Applications for admission must be sent in before the end of May. Full particulars may be obtained from the Secretary.

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REPORT OF THE COUNCIL FOR THE OFFICIAL YEAR 1915-1916.

SINCE the publication of the last Annual Report the Council have held 16 Meetings, of which the Council elected in June have held 12.

The following Committees appointed by the Council have met and reported from time to time on the matters referred to them :—

Board of Architectural Education.
Competitions Committee.
Fellowship Drawings Committee.
Finance and House Committee.
Royal Gold Medal Committee.
Irish Societies Committee.
Town Planning Committee.

Selection and General Purposes Committee.
Conditions of Contract Revision Committee.
Timber Specification Committee.
Westminster Abbey Protection Committee.
St. Paul's Cathedral Protection Committee.
Architects' War Committee and Sub-Committees.
War Record Committee.

Particulars of the work of some of these Committees are embodied in this Report under various headings.

Obituary. The losses by death have been as follows :—

FELLOWS.

Anderson : John Macvicar.
Bell : George.
Bulmer : George Bertram.
Day : Ernest.
Ely : John.
Florence : Henry Louis.

Hunt : George Henry.
Lacey : Frederick William.
Mallows : Charles Edward.
Mason : William Lovell.
Nicholas : Graham.
Ower : Leslie.

Spaul : William Henry.
Sutcliffe : George Liater.
Taylor : John Walton.
Watson : Robert.
Woods : Edward John.

RETIRED FELLOWS.

Burwell : Frederick William.

Chisholm : Robert Fellowes.
Keirle : Robert.

Davis : Henry David.

ASSOCIATES.

Brown : Baldwin.
Down : Edgar George Cusson.
Goodridge : Alfred Samuel.
Grewcock : William Thomas.
Griggs : Robert.

Hewitt : Edwin Richard.
Holland : Harry Dawber.
Hodges : Robert Francis.
Jones : Charles James.
MacGibbon : Alfred Lightly.

Nicol : Robert Dewar.
Smith : John Myrtle.
Watson : George William.
Whympier : William.

LICENTIATES.

Ball : Frederick.
Burton : Henry William.
Gibson : William Henry.
Leeson : Everard William.
Osborne : William Robert.

Powell : Daniel.
Rhodes : Herbert Sydney.
Rider : Harry Edwin.
Seanor : John Joseph.

Shanks : William.
Stephens : Samuel Cooper.
Tylor : Henry Bedford.
Wilkinson : Philip Arthur Cawte.

HONORARY ASSOCIATE

Gomme : Sir Laurence.

HONORARY CORRESPONDING MEMBER.

Ware : William Robert.

In addition to these normal losses the Council have to record the death of 12 Associates, 7 Licentiates, and 12 Students, who have laid down their lives in the service of their country. Particulars of these are given in a later part of this Report.

The following tabular statement shows the present subscribing membership of the Royal Institute compared with corresponding periods of 1912, 1913, 1914, and 1915 :—

Year.	Fellows.	Associates.	Non. Associates.	Total.
1912	859	1,581	56	2,496
1913	847	1,630	54	2,531
1914	852	1,695	56	2,603
1915	857	1,713	54	2,624
1916	852	1,679	52	2,583

During the official year since the last Annual General Meeting 33 Fellows and 44 Associates have been elected. It will be observed that the war has been responsible for a considerable decrease in the number of subscribing members.

There are now 1,919 Licentiates on the roll. Since the publication of the last Annual Report 12 Licentiates have passed the Examination qualifying for election to the Fellowship, and 7 of these have been duly elected as Fellows.

The Progressive Examinations were held in June and November-December 1915. The Preliminary was held in London, Bristol, and Manchester. The Intermediate was held in London, Bristol, and Manchester. The Final and Special Examinations were held in London. The Council desire to record their thanks for the valuable services rendered by the Honorary Secretaries and the Examination Committees of the various Allied Societies. The results are shown in the following table :—

	Admitted.	Exempted.	Examined.	Passed.	Relegated.
PRELIMINARY EXAMINATION	110	53	57	38	19
INTERMEDIATE EXAMINATION	95	60	35	16	19
FINAL AND SPECIAL EXAMINATION	81	—	81	37	44

The Ashpitel Prize was awarded to Mr. Percy Joyce Adams [A.].

The Statutory Examination qualifying for candidature as District Surveyor in London, and for candidature as Building Surveyor under Local Authorities, was held in London in October 1915. There were 8 candidates, of whom 5 passed.

The Council desire to thank the Hon. Examiners for the continuance of their invaluable services.

Since the issue of the last Annual Report the Council have appointed the following gentlemen to serve as representatives of the Royal Institute :—

Messrs. Max Clarke and F. M. Elgood	County Councils Association Road Congress and Exhibition, June 1915.
Messrs. Paul Waterhouse and W. R. Davidge	Institution of Municipal and County Engineers' Road Conference, June 1915.
Mr. Reginald Blomfield, R.A.	The London Society.
The President and Sir Aston Webb, C.B., R.A.	National Congress on Home Problems after the War.
Messrs. H. V. Lanchester and John Slater	University of London Architectural Education Committee.
Mr. J. Alfred Gotch	University of Sheffield.
Sir John Burnet and Mr. Guy Dawber	Central Organisation of Trade Interests.
The President and Messrs. Paul Waterhouse and H. D. Scarles-Wood	Committee on Organised Science.

During the course of the year the President has appointed the following architects to act as Arbitrators in connection with building disputes :—

Clarke, Max.	Hall, Edwin T.	Simpson, John W.	Tatchell, Sydney J.
Crompton, W. E. Vernon.	Hare, Henry T.	Scott, W. Gillbee.	Watson, Adam F.
Green, Mowbray A.	Munby, Alan E.	Slater, John.	Worthington, Percy S.

Since the issue of the last Annual Report the Council have made the following grants :—

Architectural Association	£500	Artists' War Relief Exhibition	£10
Architects' Benevolent Society	100	Society of Dilettanti	50
Architects' Volunteer Training Corps	50	British School at Rome	50

In addition to the special grants to the Architectural Association which were mentioned in the last Annual Report, the Council have been enabled to present to that body a further sum of £400. Of this amount £200 was paid in respect of the financial year ending on 31st December 1915 and £200 in respect of the current year.

The grant of £50 to the Society of Dilettanti was the result of an undertaking entered into before the war to enable the Society to publish their new volume of *Antiquities of Ionia*.

The Royal Gold Medal was awarded to Mr. Frank Darling, of Toronto. Mr. Darling was, unfortunately, prevented from being present at the Royal Gold Medal Meeting, but the Medal was received on his behalf by Sir George Perley, High Commissioner for Canada.

It has been decided to award the Medal this year to Sir R. Rowand Anderson, LL.D., in recognition of the merit of his executed work, his services to architectural education, and his high character and lofty ideals in the art of architecture. His Majesty the King has graciously signified his approval of the award, and the Medal will be presented to Sir Rowand Anderson at the General Meeting on the 19th June.

The work of the Royal Institute has, of necessity, been seriously affected by the war. The programme of Sessional Papers has been suspended and only business of a routine and uncontroversial nature has been transacted at the General Meetings. The Prize Competitions for the year have again been postponed, and the Examinations which in the ordinary course would have been held in November 1916 have been cancelled.

The Record of Honour which has been compiled by the Royal Institute now contains the names of some 2,250 architects who are serving in the Forces. Included in this number are 57 Fellows, 426 Associates, 228 Licentiates, and 272 Students of the Royal Institute. The following is a list of those of our members who have lost their lives in the war:—

ASSOCIATES.

Adams: Laurence Kingston	Lieut., 7th King's Liverpool Regt.	Killed in Action.
Barrow: Spencer Ellwood	Lieut., 5th Bn. King's Own Royal Lancaster Regt.	Died of Wounds.
Bownass: James Everitt	Princess Patricia's Canadian Light Infantry	Killed in Action.
Finning: Leonard John	Sergt., 24th Bn. 6th Australian Infantry Brigade	Killed in Action.
Gibson: Edmund Herbert	Lieut., Royal Naval Volunteer Reserve	Died of Wounds.
Horsfield: John Nixon	Lieut., Royal Naval Volunteer Reserve	Died of Wounds.
Hoyle: Wilfred	Royal Fusiliers	Died on Service.
Hunter: George Edward	Capt., 6th Northumberland Fusiliers	Killed in Action.
Kay: George Alexander	2nd Lieut., 2nd Notts and Derby Regt.	Killed in Action.
Leech: William Leonard Boghurst	Rifleman, 9th County of London Regt.	Died of Wounds.
Lowes: Albert Edward	A.S.C., 6th Northumberland Fusiliers	Killed in Action.
Phillips: Louis Augustus	Sergt., Public Schools Bn., Royal Fusiliers	Killed in Action.

LICENTIATES.

Bowie: George Pigram	Capt., 5th Bn. 1st Canadian Contingent	Killed in Action.
Dicken: Aldersey	Sub-Lieut., Royal Naval Volunteer Reserve	Died on Service.
Harrison: Christopher René	Lieut., 3rd Leicester Regt.	Died of Wounds.
Henman: Charles Henry Rowed	Quartermaster-Sergt., 1st Field Co., Divnl. Eng., R.N.D.	Killed in Action.
Phillips: Arthur Maxwell	Capt., 11th King's Own Yorkshire Light Infantry	Killed in Action.
Pullin: Henry Charles	Rifle Brigade	Killed in Action.
Wingate: Alexander	2nd Lieut., 9th Highland Light Infantry	Killed in Action.

STUDENTS.

Dowsett: Thomas William	Sergt., Hon. Artillery Company	Killed in Action.
Fromant: Edward George Dawson	Lie.-Cpl., 1st City of London Sanitary Coy., R.A.M.C.	Died of Wounds.
Hardman: Adrian T.	Lieut., Royal Fusiliers	Died of Wounds.
Hough: Topham Becher Dabridgecourt	2nd Lieut., 8th East Yorkshire Regt.	Killed in Action.
Irvin: John Hawksmore	4th Bn. Seaforth Highlanders	Killed in Action.
Lawson: F. H.	Capt., 5th Bn. Northumberland Fusiliers	Killed in Action.
Newbery: Charles Joseph	Private, 3rd Royal Fusiliers	Died of Wounds.
Turner: Thomas Edwin	Lieut., 13th County of London Regt.	Killed in Action.
Walch: James Bernard Millard	2nd Lieut., 2nd Royal West Surrey Regt.	Killed in Action.
Walker: Denis H.	Capt., 5th P.W.O. Yorkshire Regt.	Died of Wounds.
Whitbread: Leslie George	Private, 1/6th Bn. Manchester Regt.	Died on Service.
Whitehead: Henry Montagu	2nd Lieut., 4th East Surrey Regt.	Killed in Action.

The most important work of the year has been that done by the Architects' War Committee and its two subsidiary Committees. The Architects' Benevolent Society has rendered the most valuable

assistance in the administration of the funds subscribed for the relief of architects, and the Civic Surveys which have been set on foot with the assistance of the Royal Institute have provided paid employment for a number of members of the profession whose practices have been stopped by the war. The most important of these Surveys—that of Greater London—is housed in the R.I.B.A. Galleries, and the expenses of all the Surveys are paid by the R.I.B.A., while the salaries of the workers are paid by grants from the National Relief Fund.

Official Architecture. The consideration of the Report of the Official Architecture Committee, referred to in the last Annual Report, has been again deferred for twelve months.

Finance. The usual statement appended to this Report shows that the finances of the Royal Institute have met the strain of war conditions with great success.

Most of the architectural students are serving in the Forces and there is, consequently, a heavy fall in the receipts from examination fees. The subscriptions of all members and Licentiates serving with the Forces are also remitted. In 1915 this measure cost the Institute some £700, and in 1916 it will probably cost well over £900.

In spite of these and other losses there was a realised surplus of £719, in place of an anticipated deficit of £260, in the financial year ending on 31st December 1915, and a moderate surplus is also anticipated in the current year. It will be observed that a sum of £290 was received from the Henry Jarvis Trust in aid of the educational work of the Royal Institute. The warmest thanks of the Council are due to the Finance and House Committee, whose careful management has been responsible for such satisfactory results.

REPORT OF THE BOARD OF ARCHITECTURAL EDUCATION.

The Board have held nine meetings since the issue of the last Annual Report. At the first meeting, held on Thursday, 7th October 1915, Mr. John Slater was elected Chairman; Mr. Lewis Solomon and Mr. Paul Waterhouse, Vice-Chairmen; Mr. Gerald C. Horsley, Honorary Secretary.

Committees.—The following Committees have met and reported from time to time on the matters referred to them:—Testimonies of Study, Examinations, Exemptions, Students' Drawings for America.

Problems in Design.—During the year 104 designs have been received and adjudicated on, and of these 66 have been approved. The Designs have been exhibited, some at the Gallery of the Royal Institute, and others, by the courtesy of the Council of the Architectural Association, at the rooms of that body.

The Examinations.—The Board have conducted the Preliminary, Intermediate, Final and Special Examinations as usual, and the results, as reported to the Council, have been published.

The new scheme of Examinations referred to in the last Report of the Board has been postponed until after the War; but the Council, on the recommendation of the Board, have decided to discontinue the Preliminary Examination for the future.

Candidates for registration as Probationers will be required to submit any of the Certificates mentioned in the *KALENDAR* (see page 410), or such other satisfactory evidence of their education as may be approved by the Board. The Board will still continue to examine in the subjects of Geometrical Drawing and the Elements of Perspective, and in Freehand Drawing, those candidates who are unable to produce satisfactory drawings showing their knowledge of any of these subjects.

The Council have also decided to hold the Intermediate and Final Examinations once only this year, viz., in June.

The American Institute of Architects and English Architectural Drawings.—The Council referred to the Board an application from the American Institute of Architects suggesting that a collection of English Architectural Drawings both of buildings, and of woodwork, metal, glass decoration, and furniture, should be formed and forwarded to the Architectural School at Harvard with a view to their making a selection for purchase, and a Sub-Committee is now engaged in the work of selection.

Recognised Schools of Architecture.—The Certificate of the three years' Architectural Course at the Leeds School of Art is now accepted by the Board as exempting from the Intermediate Examination, the condition being that for the examination at the close of the course an External Examiner approved by the Board is appointed.

REPORT OF THE TOWN PLANNING COMMITTEE.

Six meetings of the Committee have been held. Sir Aston Webb was re-elected Chairman of the Committee. Professor Beresford Pite has acted as Vice-Chairman, and, on the departure for India of Mr. H. V. Lanchester, Mr. W. R. Davidge was appointed Honorary Secretary.

The subject of the suggested Thames Barrage between Tilbury and Gravesend, originally proposed in 1903, came before the Committee as the result of a letter to the Institute from Lord Desborough, Chairman of the Thames Conservancy. Much information on the subject has been collected, and an abstract, by the Hon. Secretary, of the book, "The Port of London and the Thames Barrage," has been printed in the JOURNAL for the information of members generally. The subject is being further considered by the Committee.

The volume of Transactions of the R.I.B.A. Town Planning Conference, 1910, contains a large amount of valuable information, and in order that this might be generally available, the Council, on the Committee's recommendation, have agreed to the price of the volume being reduced to 10s. 6d. (the original price being 24s.). A limited number of copies of the Transactions of the Conference are still available at this reduced figure.

A circular letter to architects and Allied Societies has been prepared and issued, and a draft circular to Local Authorities contemplating Town-Planning and Improvement Schemes has been approved by the Council.

The Institute has been represented on each of the six Sectional Conferences, held at the Local Government Board, on the subject of Arterial Roads in Greater London. A draft resolution for submission to the final Conference has been prepared and approved by a meeting of the professional and other societies represented at the L.G.B. Conferences. The resolution will be proposed by Sir Aston Webb at the final Conference in due course.

A letter has also been addressed to the London County Council, pointing out the necessity of reserving the routes of the arterial roads as approved by the Conferences.

A proposal submitted to Parliament by the S.E. & C. Railway Co. for the construction of steel arched cantilevers and additional masonry piers under the eastern portion of the Charing Cross Railway Bridge, estimated to cost £150,000, has been considered by the Committee, and on the Committee's recommendation the Council of the Institute approached the London County Council with the suggestion that the basis of their opposition should if possible be broadened to avoid so large an expenditure on the present unsatisfactory structure, especially in view of the possibility of the eventual removal of the station to the south side and the need for a road bridge at this point. The L.C.C., while sympathising with the views of the Institute on the matter, did not, however, see their way to take the suggested action. A joint letter, signed by the President and Sir Aston Webb, as Chairman of the Council of the London Society, was subsequently sent to the *Times* on the subject of the Charing Cross Railway Bridge.

The Bill is now being considered by a Committee of the House of Lords. By a resolution of that House, moved by Lord Plymouth, it is an instruction to the House of Lords Committee to hear evidence from the R.I.B.A. and the London Society, and efforts are being made to secure proper consideration to the whole question of road communication across the Thames at Charing Cross.

On the recommendation of the Committee, the Council have decided to obtain periodically a list of all private Bills, such as the Charing Cross Railway Bridge Bill, to afford the Institute an opportunity of investigating the probable effect of the proposals embodied in them.

A number of Town-Planning Schemes have been prepared by Local Authorities during the year, and the Committee, in conjunction with our Allied Societies, are arranging as far as possible to be represented at the public inquiries conducted by the Local Government Board.

REPORT OF THE ART STANDING COMMITTEE.

Since the issue of the last report the Art Standing Committee have held eight meetings. Mr. Edward Warren, F.S.A., was elected Chairman, Mr. H. H. Statham, Vice-Chairman, and Mr. Harry Redfern and Mr. H. P. Burke Downing, Honorary Secretaries of the Committee.

Mr. Warren has now been appointed administrator of a large Military Hospital at Corfu, and Mr. Redfern is engaged upon war work for the Government, necessitating his temporary residence in Scotland. Mr. L. Rome Guthrie, Mr. Wyatt Papworth, and Mr. Philip E. Webb have joined various branches of the fighting forces. The War has thus claimed many members of the Committee, and, on the other hand, has doubtless reduced the number of projects which might in the ordinary course come under their consideration. As to some matters, moreover, which in normal times might have engaged the attention of the Committee, it has been felt that serious consideration could not be given to them with the expectation of any useful result during the time of war.

Of matters under consideration when the last report was made, the proposal to do away with the picturesque wooden bridge over the Thames at Goring, and to substitute one of ferro-concrete construction, need no longer occupy the attention of the Committee. The project has been abandoned owing to the Treasury declining to sanction the cost of rebuilding, and the bridge will be merely repaired.

The report of the Committee containing various suggestions for the amendment of the London Building Acts was presented to the Council in June last, and by them forwarded to the Practice and Science Standing Committees. The Science Committee have made some suggestions, but the consideration of these has been deferred by the Council until the report of the Practice Committee has also been received.

A good deal of attention has been given by the Committee to the very prevalent defacement of London by advertisements, sky signs, etc., with the result that the Council have been in communication with the London County Council urging upon them the promotion of legislation to strengthen the control of street advertisements. Though the London County Council rightly consider that the subject is such as could not be dealt with during the War, it is hoped that the views which the Committee have formulated may prove useful in the future.

Against the project to demolish the Tolbooth Steeple, Glasgow, and to re-erect it between London Street and Gallow Gate as a part of the Glasgow Cross Improvement Scheme, a strong representation was made by the Glasgow Institute of Architects, and this Committee, after examining the proposal, took steps to support that representation and a deputation to the Office of Works for which the Glasgow Institute were arranging, but action became unnecessary owing to the abandonment for the time of the proposal. It is satisfactory to know that the Tolbooth Steeple for the present is undisturbed. The Committee will, however, continue to watch this scheme.

An interesting suggestion for the architectural treatment of the Post Office site and streets adjoining was submitted to the Committee at a preliminary stage by Mr. H. H. Statham, but it is unnecessary to deal with the proposal here, as Mr. Statham intends to publish it in the JOURNAL when more developed.

Various other matters have been under the consideration of the Committee, but, owing to the general postponement of all building schemes, no important action has in any case been necessary during the Session.

REPORT OF THE LITERATURE STANDING COMMITTEE.

The Literature Standing Committee have to report that since their election in June, 1915, seven meetings have been held, making nine meetings altogether since the issue of the last Report.

Mr. C. Harrison Townsend was elected Chairman, Mr. C. E. Sayer, Vice-Chairman, and Messrs. Charles Spooner and Martin Shaw Briggs, Hon. Secretaries.

In the Committee's last Report reference was made to the advisability of compiling an Index of architectural works which have been destroyed in Belgium during the war. A Sub-Committee was formed, consisting of the Chairman, Mr. Harrison Townsend, Messrs. Arthur Stratton, Charles Spooner, Walter Millard, the Librarian, and Mr. Martin Shaw Briggs acting as Hon. Secretary. In addition to the compilation of the Index, it was decided to form a collection of drawings, photographs, and prints to be preserved in the Library of the Institute. With this object in view a letter was drawn up and issued in the Institute Journal, *The Times* and other influential newspapers, soliciting gifts for the collection. Numerous original drawings, photographs, etc., were received from various contributors, including Sir Ernest George, Mr. William Woodward, Mr. Walter Millard, Mr. Halsey Ricardo, Mr. C. Wontner Smith, Mr. Ernest Swain, Mrs. Vaughan, Miss Fellows, Miss Aitchison, and Mr. W. Hilton Nash. The collection which has so far thus been formed is now available for reference.

On instructions from the Committee the Librarian has had the most valuable drawings and editions removed to the basement strong room for greater safety during the War.

The JOURNAL and KALENDAR Committee have had before them certain suggestions of the Council with regard to modifications in the JOURNAL. The Report which this Committee submitted was approved, and the recommendations forwarded to the Council.

The Committee is greatly indebted to its Chairman, Mr. C. Harrison Townsend, for the presentation of some 150 photographs of mosaic work in Italy, Sicily, and the Holy Land.

With a view to supplementing the Institute Collection of Drawings by past architects of distinction, it has been possible to obtain through the good offices of the President, Mr. Halsey Ricardo, Mr. Gerald Horsley, and Mr. R. A. Briggs, donations of a large number of valuable drawings by Norman Shaw, William Burges, G. E. Street, Eden Nesfield, and Philip Webb. Exhibitions of these are being held from time to time in the East Gallery.

The Committee decided that, having regard to the need of the utmost economy during the war, the purchase of books should be restricted as far as possible.

The following is the Librarian's Report to the Committee :—

During the twelve months ending the 31st March of the present year 157 volumes have been added to the Library of the Royal Institute, exclusive of periodicals, reports and transactions of Societies, and parts of works issued in serial form.

The number of works presented was 53 volumes and 12 pamphlets.

The works purchased numbered 104 volumes and 4 pamphlets, of which 31 were added to the Loan Library.

The attendance of readers in the Reference Library numbered 2,637.

The number of books issued on loan was 1,560.

The number of tickets issued for admission to the Library, other than to members of the Institute or to Students and Probationers, was 60.

The books issued through the post numbered 205.

The attendance of readers has naturally diminished owing to the large number of Members and Students who have entered the Army, but it should also be noted that an increasing use of the telephone is made by Members for the purpose of bibliographical and other enquiries of which no statistics are kept.

Donations of books, pamphlets, or drawings have been received from Mr. Robert Atkinson, Mr. W. H. Elgar, the Society of Dilettanti, Sir Thomas Graham Jackson, Mr. Benj. Ingelow, the Government of Canada, Mr. Henry Lovegrove, Mr. Andrew Oliver, Mr. W. Woodbridge Biggs, Mr. T. Fisher Unwin, Mr. George Benson, Mr. L. Sylvester Sullivan, Mr. Francis Buckley, Mr. J. G. Clason, the Engineering Standards Committee, Mr. John Murray, Mr. J. M. Gething, Messrs. B. T. Batsford, Ltd., "The Studio," Ltd., the Government of India, the Thames Barrage Committee, Mr. K. A. C. Creswell.

Among the books purchased or presented during the year may be mentioned : Cust's *History of the Society of Dilettanti*, Byne and Stapley's *Rejería of the Spanish Renaissance*, Audsley's *Practical Decorator and Orna-*

mentist, Baldwin Brown's *Arts in Early England* (vols. 3 and 4), Briseux's *Architecture Moderne*, &c., Lomazzo's *Trattato dell' arte della pittura, scoltura et architettura*, Thomas's *Original Designs in Architecture*, &c., Adams' *Mont-Saint-Michel and Chartres*, Moreau-Nélaton's *Églises de Chez Nous*, Tipping's *Grinling Gibbons and the Woodwork of his Age*, E. R. and J. Pennell's *Lithography and Lithographers*, Weaver's *Memorials and Monuments*, &c., Tallis's *London Street Views*, Gardner's *French Sculpture of the Thirteenth Century*, &c., Society of Dilettanti's *Antiquities of Ionia* (Part the Fifth), Delstanche's *The Little Towns of Flanders*, Cram's *Heart of Europe*, Clapham's *Lesnes Abbey*, Forestier and Omond's *Belgium*, Geddes' *Cities in Evolution*, Du Cerceau's *Leçons de Perspective Positive*, Balcarres' *Evolution of Italian Sculpture*, Cadbury's *Town Planning*, Rivington's *Notes on Building Construction* (new ed.), March Phillipps' *Form and Colour*.

LIBRARY STATISTICS 1915-16.

DATE.	DAY ATTENDANCES			EVENING ATTENDANCES.			Books issued on Loan.
	Members.	Non-Members.	Total.	Members.	Non-Members.	Total.	
1915.							
April	111	88	199	37	55	92	183
May	92	83	175	22	49	71	151
June	96	93	189	37	41	78	124
July	118	71	189	19	26	45	115
August	Reference Library Closed.			Reference Library Closed.			50
September	81	52	133	20	28	48	134
October	134	84	218	24	27	51	145
November	119	104	223	16	22	38	142
December	86	77	163	13	14	27	107
1916.							
January	98	85	183	20	27	47	130
February	93	85	178	9	14	23	145
March	111	115	226	21	20	41	134
TOTAL	1,139	937	2,076	238	323	561	1,560

REPORT OF THE PRACTICE STANDING COMMITTEE.

Nine meetings have been held since the date of the last report. The officers elected at the commencement of the session were:—Mr. Max Clarke, Chairman; Mr. Edward Greenop, Vice-Chairman; Messrs. Matt. Garbutt and Alan E. Munby, Honorary Secretaries.

The Committee have had before them a large number of matters, of which the following are among the most important.

Experts' Services and Architects' Charges in relation thereto.—Questions having been raised as to the position of the architect and his payment in connection with the employment of expert engineers or other specialists to advise upon special matters or to design details, as in the case of ferro-concrete structures or those consisting largely of metal, or in the case of large electric or heating installations, the Committee have appointed a sub-committee which is considering the whole question.

Notes on Dilapidations.—The revision of the Institute Handbook on Dilapidations has now been completed and the draft submitted to the Council with a recommendation that a new edition be issued.

Special Sub-committees.—The Professional Conduct Sub-committee and the Schedule of Charges Sub-committee were re-appointed at the meeting in July, 1915. The former have held several meetings, but the latter have not yet had occasion to assemble. In connection with the Professional Conduct Sub-committee and with certain other Sub-committees, the Committee, while congratulating Messrs. Edwin Gunn and Horace W. Cubitt upon their patriotic action in joining His Majesty's Forces, have to regret the loss of the valuable secretarial assistance of those gentlemen, which has been the more felt because of the constant increase of the Committee's work and the number of cases which it is desirable to consider by means of sub-committees.

Professional Conduct, etc.—At the request of the Council, the Committee considered and reported upon the custom of architects entering the witness-box to disparage the work and belittle the claim to

payment of brother architects who were unfortunately compelled to sue for their fees. As a result of the Committee's report, the Council have added to the paragraphs upon Professional Conduct, etc., published in the *KALENDAR*, the following:—"That in the opinion of the Council, the Royal Institute having adopted a Scale of Professional Charges, it becomes the duty of members, when giving advice relating thereto, not to weaken the value of the Scale."

Professional Advertising.—The Committee have had before them several complaints as to advertising by members, and would like to draw general attention to the Council's opinion, published upon page 70 of the *KALENDAR*, that advertisement by an architect is a contravention of By-law 24.

Professional Day.—The question having been raised as to the number of hours which should be considered to constitute a professional "day," as the term "day" is employed in the Schedule of Charges, the Committee thought the matter of sufficient importance to justify direct inquiry by the Council, who, in the *JOURNAL* of 31st July 1915, invited communications from members upon the point, and also directed inquiry to be made as to the views of Allied Societies and the practice of kindred institutions. Up to the present a decision has not been arrived at.

Appointment of Arbitrator.—It having been suggested that it would be useful to publish a Form of Appointment of an Arbitrator applicable to disputes not coming under the R.I.B.A. Conditions of Contract, the Committee prepared a draft which has been submitted to the Council and is still under consideration.

Personal Matters.—A considerable amount of time has been occupied by matters of such a personal nature as to render any publication undesirable.

Members' Queries.—The number of inquiries upon matters of professional practice has again been large, and many questions have also been propounded as to difficulties arising in consequence of the war. Some of these latter have turned upon purely legal considerations, as to which the Committee are, of course, unable to express any authoritative opinion. The Committee have also occasionally been obliged to refrain from expressing opinions on the ground that the subjects of inquiry have been, or have been likely to come, before the Courts. The Committee would point out that it is their established practice to refrain from expressing their views under such conditions, as well as when they have before them only *ex-parte* statements.

REPORT OF THE SCIENCE STANDING COMMITTEE.

Since the date of their last Report nine meetings of the Committee have been held, with an average attendance of ten. Officers for the current Session were elected as follows:—Chairman, Mr. E. W. M. Wonnacott; Vice-Chairman, Mr. Geo. Leonard Elkington; Hon. Secretaries, Mr. Osborn C. Hills and Mr. A. O. Collard.

In November Mr. Elkington resigned the Vice-Chairmanship owing to his having enlisted, and Mr. Bernard Dicksee was elected in his stead. Subsequently, Mr. Wonnacott having ceased to be a member of the Institute, Mr. Dicksee was in January elected Chairman, and Mr. W. E. Vernon Crompton Vice-Chairman.

Westminster Hall Roof.—No further visit has been paid as Mr. Baines, M.V.O., wrote that the urgent War services which have engaged the attention of his Department have delayed the work to the Hall, and suggesting that a further visit be deferred until some of the reinforcement is actually fixed.

Air Raids and Damage by Enemy Bombs.—The Committee are taking steps to collect such information as is possible of the effect of enemy bombs on buildings and the resistance of the various materials employed in the structures, and have sought the co-operation of the District Surveyors' Association. It is, however, anticipated that there will be considerable difficulty in obtaining useful and reliable data and nothing can be published at present.

Research Council of the Board of Education.—The Committee's attention was drawn to a paragraph in the Press announcing the proposed formation by the Privy Council of a Research Council. The

Committee, with the warm approval of the President, wrote to Sir Amherst Selby-Bigge, and ultimately, on the President's suggestion, it was arranged that some of our members should discuss the subject with Sir Wm. McCormick, Chairman of the Advisory Committee of the Privy Council. The Chairman and Messrs. F. R. Farrow, Digby Solomon, Vernon Crompton, Alan E. Munby, and H. D. Searles Wood (the two latter being co-opted by the Committee) were duly selected. Among the subjects suggested for investigation are:—The extended Use of Colonial Timbers in this country, Dry Rot, Corrosion of Metal Surfaces, and Improvements in the Manufacture of Floor Lights. The Sub-Committee have held seven meetings and have had interviews with the Advisory Council, the Imperial Institute, the Institute of Metals, and the Iron and Steel Institute.

Dry Rot in Timber.—This subject has been much under discussion, and a draft for a revised leaflet was under consideration by the Committee dealing very fully with the subject in respect to (1) the disease generally; (2) its introduction into buildings; (3) conditions favourable to growth; (4) suggested safeguards in new buildings; (5) eradication in old buildings, and (6) list of publications on the subject. Visits were made to Kew Gardens Library and various Authorities consulted, but the Committee regretted to find that research work in the special investigation of this disease does not appear to have been carried far. The Committee, therefore, welcomed the possible opportunity to get the matter taken up by the Research Council of the Privy Council as outlined in the previous paragraph.

Metropolitan Water Board Regulations.—On the suggestion of the Committee copies of the correspondence between the Institute and the Metropolitan Water Board (published in the JOURNAL, pp. 69 and 70) have been sent to Mr. Thomas McIntyre, as representative of the trades interested, to the Editor of the *Master Builders' Handbook*, and to the President of the Board of Trade.

Prohibition of the Importation of Building Materials.—The Committee drew the Council's attention to the proposed prohibition of the importation of building materials, and in view of the effect such prohibition would have on the building trade, suggested that steps be taken to limit such prohibition as far as possible, having full regard to the military needs of the country.

London County Council (General Powers) Act, 1909, Part IV.—The Council of the Institute referred to the Committee a letter from the District Surveyors' Association suggesting a conference of representatives of the Institute and others to agree certain points of detail concerning which there appears to be considerable divergence of opinion and practice in reference to this Act. The Council desired the Committee to appoint three representatives and Messrs. F. R. Farrow, W. E. Vernon Crompton, and F. N. Jackson were duly appointed. The Conference has had several meetings and will make its Report in due course.

Tests of Building Stones.—The Sub-Committee appointed made a further inspection of the stones undergoing the weathering test at the Geological Museum, and in consequence of its inspection certain suggestions were made relative to the discolouration of the stones in contact with the metal supports and the prevention of chemical action at such points of contact.

The London Building Acts.—Several meetings were devoted to consideration of the Art Standing Committee's suggested amendments of the London Building Acts. Several alterations were made by the Committee, who were in agreement with the main objects sought.

Defective Roofing Tiles.—A Report on this subject was received from the Sub-Committee, visits to tile manufactories were arranged to take place in July, and certain old tiles were examined. Owing, however, to difficulties due to the War visits have had to be postponed and nothing further has been done.

Construction of Belfries and Effect of Vibration on Buildings.—The Belfries and Vibration Sub-Committee early in the year completed its enquiry after paying several visits to various works and buildings, and is now in a position to prepare a Paper to be read at some future Ordinary General Meeting.

REPORT OF THE HONORARY AUDITORS FOR 1915.

We have carefully examined and checked the books and accounts with the vouchers for the year 1915. We have also examined the share certificates held by the Institute, and the list of share certificates deposited at the Bank, all of which were found to be in order and to agree with the Balance-sheet prepared by the Accountants.

The following is a list of the principal items of income and expenditure during the last three years, viz., 1913, when the nation was at peace, 1914, in which we were at war for the last five months, and 1915, when we were at war for the whole year.

	1913.	1914.	1915.
Income	£12,869 14 6	£14,114 1 9	£10,740 4 9
Expenditure...	11,567 13 3	11,391 12 4	10,020 11 7
Surplus	1,302 1 3	*2,722 9 5	719 13 2
Bank overdraft	£4,846 7 1	£2,707 1 10	£2,044 2 3
Examination fees	1,633 16 0	1,169 14 0	749 14 0
Examination expenses	357 8 2	353 15 4	237 17 8
Use of rooms and Galleries and rent from tenants	392 6 3	454 4 8	85 5 0
Grants	534 0 0	1,148 0 0	1,501 7 5
Journal	2,129 9 9	1,804 15 5	1,531 3 11
Contributions	538 2 6	518 14 0	604 18 2
Subscriptions in arrear	776 16 0	1,063 13 0	1,169 7 0

* Increase due to final dividend from Architectural Union Company on liquidation.

In the Report for 1914 the Council submitted a rough estimate of income and expenditure for 1915, in which a deficit of £260 was anticipated. It is very satisfactory to note that instead of a deficit the accounts show a surplus of £719 18s. 2d. The overdraft at the Bank has been lowered from £2,707 1s. 10d. in 1914 to £2,044 2s. 3d. in 1915, viz., a reduction of £662 19s. 7d.

Owing to so many of the younger men serving in the Army or Navy, the number of candidates for examination has greatly lessened, and the fees received have fallen from £1,169 14s. in 1914 to £749 14s. in 1915.

The Institute having handed over the Galleries, free of rent, for the important work now being carried on for the purpose of the Civic Survey, the revenue from letting these Galleries has been greatly curtailed, viz., from £454 4s. 8d. in 1914 to £85 5s. in 1915, each item including the rent of £80 paid by the R.I.B.A. tenants.

The contributions to the Allied Societies, Civic Survey and War Committee amount to £604 18s. 2d., an increase of £86 4s. 2d. over the previous year.

The grants to the Architects' Benevolent Society, Architectural Association, &c. (as shown on the Balance-sheet), amount to £1,501 7s. 5d. in comparison with £1,148 in 1914, viz., an increase of £353 7s. 5d.

As will be seen from the Balance-sheet in 1914, certain sums had accumulated as balances from the various Trust Funds held by the R.I.B.A. A great part of these balances, viz., £867, has now been invested in the 4½ per cent. War Loan.

Savings have been effected in Salaries, Gas and Electric Light, General Printing, General Meetings, Examination Expenses, Repairs, Journal and Miscellaneous Expenses.

We are of opinion that the funds of the Institute have been well and wisely administered, and that whilst the necessarily increased amounts have been expended on Contributions, Grants, &c., consequent on the war, that wherever possible economy has been practised in other directions.

We find the books have been kept in the usual careful and systematic manner, which renders the task of the Auditors a very light one. We think that appreciation is due to the Staff, for the care displayed by the officials in the best interests of the Institute.

R. STEPHEN AYLING [F.].

ARTHUR W. SHEPPARD [A.].

Income and Expenditure Account of Ordinary Funds for the Year ended 31st December 1915.

Exclusive of Entrance Fees and Subscriptions in advance.

CE.

EXPENDITURE.						INCOME.							
TO ORDINARY EXPENDITURE—						BY ORDINARY INCOME—							
Rent	£	s.	d.	£	s.	d.	Subscriptions.....	£	s.	d.	£	s.	d.
Rates and Taxes	69	5	0				784 Fellows at £4 4s.	3292	10	0			
Interest on Mortgages	574	8	0				3 Ditto on account	6	4	0			
	160	0	0	803	11	0	Ditto Arrears	96	12	0			
Gas and Electric Lighting				127	2	3	1304 Associates at £2 2s.	2738	8	0			
Fuel				58	2	0	4 Ditto on account	4	3	0			
Salaries				2038	1	0	Ditto Arrears	129	3	0			
General Printing, Stationery, Stamps, and Petty Expenses				604	10	2	50 Hon. Associates at £2 2s.	105	0	0			
General Meetings and Exhibitions				71	10	1	Ditto Arrears	27	6	0			
Housekeeping and Wages				401	7	8	1645 Licentiates at £1 1s.	1727	5	0			
Advertisements				89	13	9	3 Ditto on account	1	11	0			
Examination Expenses				237	17	8	Ditto Arrears	57	15	0			
General Repairs				137	11	2	Reinstated Members	7	7	0			8193 10 0
Fire Insurance				36	11	3							
Medals and other Prizes				50	0	0	JOURNAL and KALENDAR—						
Grant to Library	200	0	0				Advertisements	833	6	8			
Grant to Architects' Benevolent Society (including amount £214 5s. 4d. received as per contra)	314	5	4				Sales of Journal and other Publications..	384	5	3			1107 11 11
Grant to Architectural Association (Includ- ing amount £240 received as per contra) ..	500	0	0				Examination Fees—						
Grant to A. A. Sketch Book	25	0	0				Statutory	32	11	0			
Grant to Royal Architectural Museum	21	0	0				Preliminary	195	6	0			
Grant to Architects' Training Corps	50	0	0				Intermediate	211	1	0			
Grant to British School at Rome (amount received as per contra)	50	0	0				Special and Final (forfeited)	210	0	0			
Grant to Architectural Drawings Exhi- bition, Paris 1914 (including amount £9 12s. 6d. received as per contra)	191	2	1				Licentiates	100	16	0			740 14 0
Grant to Artists' War Relief Exhibition	10	0	0				Use of Rooms—						
Grant to Society of Dilettanti	50	0	0	1501	7	5	R.I.B.A. Tenants	80	0	0			
							Arbitrations	5	5	0			85 5 0
The JOURNAL—							Grants from Jarvis Trustees for Architec- tural Education						
Reporting	31	16	9					240	0	0			290 0 0
Printing and Binding	234	19	11					50	0	0			214 5 4
Illustrations	65	2	2				Artists' War Relief Exhibition						
Addressing, Postage, and Carriage	599	5	1				A. A. Drawings Exhibition (Paris) Contribu- tions				9	18	6
				1531	9	11							
The KALENDAR—													
Printing	278	6	9										
Postage and Carriage	55	11	1										
				333	17	10							
Contributions to Allied Societies				417	7	6							
Civic Survey				28	14	8							
War Committee				158	16	5							
MISCELLANEOUS EXPENSES—													
Legal and Accountants' Charges	64	0	0										
Presidents of Allied Societies	31	14	1										
Telephone	42	4	9										
Council Dinner Guests	27	18	5										
President's Portrait Fund	74	17	6										
Aircraft Insurance	61	5	3										
Sundries	55	17	4										
				357	17	4							
Reserve for Fine payable at renewal of Lease				7	0	0							
Interest on Overdraft				57	19	5							
Surplus for the year carried to Balance Sheet				719	13	2							
				£10710	4	9							£10740 4 9

SAPPERY, SOXS & Co.,
Chartered Accountants.

Examined with the vouchers and found to be correct. 7th April 1916. { R. STEPHEN AYLING (F.)
ARTHUR W. SHEPPARD (A.) } Hon. Auditors.

Dr.		Balance Sheet of Ordinary Funds, 31st December 1915.				Cr.		
LIABILITIES.		£	s.	d.	ASSETS.	£	s.	d.
To Sundry Creditors—					By Premises	35622	7	2
Sundry	1222 0 4				(Subject to a Mortgage of £4000 @ 4 per cent.)			
Mortgage Interest	40 0 0				By Debtors, Rent, Advertisements, &c.	457	10	0
Rent	17 5 0	1270	5	4	By Subscriptions in Arrear for 1915 and previously	1169	7	0
Reserve for fine payable on renewal of lease			56	0 0				
Bank Overdraft		2044	2	3				
Examination Fees anticipatory of election		141	15	0				
Subscriptions received in advance		89	7	4				
Accumulated Fund—								
Balance as per last Account	32784 7 2							
Add Entrance Fees in 1915								
Fellows	86 2 0	161	14	0				
Associates	75 12 0	779	16	0				
Arrears for 1915		33725	17	2				
Less Arrears received or cancelled	£874 2 0							
Furniture and Fittings bought	132 14 1	806	16	1				
		32918	1	1				
Add Surplus of Income and Expenditure Account for 1915	710 13 2	33638	14	3				
		£37249	4	2				
						£37249	4	2

NOTE:—
A fine of £7 per annum is payable every 14 years in respect of the premises under a Lease from the Corporation of the City of London. Notice of renewal must be given at Michaelmas, 1921, and the fine of 1923 paid.

SAFFERY, SOXE & CO.,
Chartered Accountants.

Examined with the vouchers and found to be correct. 7th April 1916. { R. STEPHEN AYLING [F.]
ARTHUR W. SHEPPARD [A.] } Hon. Auditors.

Revenue Accounts of Trust Funds for the Year ended 31st December 1915.

Dr.	£ s. d.	Cr.	£ s. d.
ASHPITEL PRIZE FUND:—			
To purchase of £76 8s. 11d. 4½ per Cent. War Loan ...	75 0 0	By Balance from last Account	81 0 0
To cost of Ashpitel Prize	10 0 0	By Dividend on £305 1s. 8d. New South Wales 4 per Cent. Debentures (1922)	10 2 6
To Balance carried forward	7 11 8	By Dividend on £76 8s. 11d. 4½ per Cent. War Loan	1 9 2
	92 11 8		92 11 8
ANDERSON AND WEBB FUND:—			
To Grant to the Architectural Association	250 0 0	By Balance from last Account	273 8 8
To purchase of £35 13s. 6d. 4½ per Cent. War Loan ...	35 0 0	By Dividend on £58 6s. New South Wales 4 per Cent. Inscribed Stock (1942)	2 6 6
To amount paid Board of Architectural Education visitor ..	2 2 0	By Dividend on £594 18s. 4d. New South Wales 4 per Cent. Debentures (1922)	21 15 0
To Balance carried forward	11 1 10	By Dividend on £35 13s. 6d. 4½ per Cent. War Loan	13 3
	298 3 10		298 3 10
ARTHUR CATES LEGACY:—			
To purchase of £112 2s. 4d. 4½ per Cent. War Loan ...	110 0 0	By Balance from last Account	74 18 5
To Balance carried forward	8 17 5	By Dividends on £1160 4 per Cent. N.E. Railway Preference Stock	41 16 2
	118 17 5	By Dividend on £112 2s. 4d. 4½ per Cent. War Loan	2 2 10
			118 17 5
DONALDSON TESTIMONIAL FUND:—			
To purchase of £12 4s. 7d. 4½ per Cent. War Loan ...	12 0 0	By Balance from last Account	12 13 0
To Balance carried forward	3 1 7	By Dividend on £72 1s. & N.W. Railway 4 per Cent. Consolidated Preference Stock	2 3 1
	15 1 7	By Dividend on £12 4s. 7d. 4½ per Cent. War Loan	4 0
			15 1 7
DONATION FUND:—			
To purchase of £76 8s. 11d. 4½ per Cent. War Loan ...	75 0 0	By Balance from last Account	76 3 7
To Balance carried forward	2 13 0	By Dividend on £76 8s. 11d. 4½ per Cent. War Loan	1 9 5
	77 13 0		77 13 0
GODWIN BURSARY:—			
To amounts paid, viz.:		By Balance from last Account	67 5 1
W. Milburn, Jr. [A.]	30 0 0	By Dividend on £1030 Caledonian Railway 4 per Cent. Stock	35 11 6
W. R. Davidge [A.]	11 5 0	By Dividend on £33 19s. 6d. 4½ per Cent. War Loan	13 0
To purchase of £33 19s. 6d. 4½ per Cent. War Loan ...	33 6 8		
To Balance carried forward	18 17 11		
	93 9 7		93 9 7
GRISSELL LEGACY:—			
To purchase of £20 7s. 8d. 4½ per Cent. War Loan ...	20 0 0	By Balance from last Account	10 1 4
To Balance carried forward	3 7 1	By Dividend on £20 0s. 8d. "B" Annuity Great Indian Peninsula Railway	12 17 11
	23 7 1	By Dividend on £20 7s. 8d. 4½ per Cent. War Loan	7 10
			23 7 1
LIBRARY FUND:—			
To Purchase of Books, Binding, &c.	118 17 5	By Balance from last Account	2 1 8
To Petty Expenses	4 12 5	By Annual Grant from Ordinary Funds	200 0 0
To Balance carried forward	80 13 4	By Fines, &c. (Loan Library)	1 6
	202 3 2		202 3 2
OWEN JONES STUDENTSHIP:—			
To amount paid Wm. Harvey	40 0 0	By Balance from last Account	202 3 8
To purchase of £295 11s. 9d. 4½ per Cent. War Loan ...	290 0 0	By Dividend on £2128 Midland Railway 2½ per Cent. Debenture Stock	47 19 10
To Balance carried forward	42 0 0	By Dividend on £1247 G.W. Railway 5 per Cent. Consolidated Stock	56 3 7
	372 0 0	By Dividend on £295 11s. 9d. 4½ per Cent. War Loan	6 12 11
			372 0 0
PUGIN MEMORIAL FUND:—			
To Amount paid to W. Cecil Young [A.]	40 0 0	By Balance from last Account	2 12 0
To Cost of Medal	1 9 6	By Dividend on £1070 L. & N.W. Railway 4 per Cent. Consolidated Preference Stock	39 0 0
To Balance carried forward	2 6		41 12 0
	41 12 0		
SAXON SNELL BEQUEST:—			
To purchase of £152 17s. 10d. 4½ per Cent. War Loan..	150 0 0	By Balance from last Account	169 13 7
To Balance carried forward	44 4 9	By Dividend on £698 4s. New Zealand 3½ per Cent. Stock ..	21 12 9
	194 4 9	By Dividend on £152 17s. 10d. 4½ per Cent. War Loan	2 18 5
			194 4 9
TITE LEGACY FUND:—			
To Balance carried forward	47 2 3	By Balance from last Account	21 12 11
	47 2 3	By Dividend on £1150 2½ per Cent. Consols	25 9 4
			47 2 3
WIMPERIS BEQUEST:—			
To purchase of £67 19s. 4½ per Cent. War Loan	66 13 4	By Balance from last Account	155 10 7
To Balance carried forward	117 11 7	By Dividend on £1024 18s. 8d. Metropolitan Water Board 3 per Cent. "B" Stock	27 8 4
	£184 4 11	By Dividend on £67 19s. 4½ per Cent. War Loan	1 6 0
			£184 4 11

SAFFERY, SONS & CO.,
Chartered Accountants.

SAFFERTY, SONS & CO.,
Chartered Accountants.

Balance Sheet of Trust Funds, 31st December 1915.

Dr.	£	s.	d.	£	s.	d.	Cr.
To ASHPITEL PRIZE FUND:—							
Capital—£205 1s. 8d. New South Wales							
4 per Cent. Debentures (1922): Value							
at 31st December, 1915	302	0	8				
£76 8s. 11d. 4½ per Cent. War Loan	74	6	10	376	7	6	
Balance at credit of Revenue Account				7	11	8	
To ANDERSON AND WEBB FUND (Board of							
Architectural Education):—							
Capital—£594 18s. 4d. New South Wales							
4 per Cent. Debentures (1922): Value							
at 31st December, 1915	568	10	4				
£58 6s. New South Wales 4 per Cent.							
Inscribed Stock (1942): Value at 31st							
December, 1915	55	7	8				
£35 13s. 6d. 4½ per Cent. War Loan	34	13	11	679	0	11	
Balance at credit of Revenue Account				11	1	10	
To ARTHUR CATES LEGACY FUND:—							
Capital—£1160 N.E. Railway 4 per Cent.							
Preference Stock: Value at 31st Decem-							
ber, 1915	1126	13	0				
£112 2s. 4d. 4½ per Cent. War Loan	109	0	8	1235	13	8	
Balance at credit of Revenue Account				8	17	5	
To DONALDSON TESTIMONIAL FUND:—							
Capital—£72 L. & N.W. Railway 4 per							
Cent. Consolidated Preference Stock:							
Value at 31st December, 1915	70	4	0				
£12 4s. 7d. 4½ per Cent. War Loan	11	17	10	92	1	10	
Balance at credit of Revenue Account				3	1	7	
To DONATION FUND:—							
£76 8s. 11d. 4½ per Cent. War Loan	74	6	10	74	6	10	
Balance in hand				2	13	0	
To GODWIN BURSARY FUND:—							
Capital—£1030 Caledonian Railway 4 per							
Cent. Debenture Stock: Value at 31st							
December, 1915	1030	0	0				
£33 18s. 6d. 4½ per Cent. War Loan	33	0	10	1063	0	10	
Balance at credit of Revenue Account				18	17	11	
To GRISSELL LEGACY FUND:—							
Capital—£20 0s. 8d. "B" Annuity Great							
Indian Peninsula Railway: Value at							
31st December, 1915	363	2	1	382	18	6	
£20 7s. 8d. 4½ per Cent. War Loan	10	16	5	3	7	1	
Balance at credit of Revenue Account							
To LIBRARY FUND:—							
Balance at credit of this Fund				80	13	4	
To OWEN JONES STUDENTSHIP FUND:—							
Capital—£2128 Midland Railway 2½ per							
Cent. Debenture Stock: Value at 31st							
December, 1915	1311	7	7				
£1247 G.W. Railway 5 per Cent. Con-							
solidated Guaranteed Stock: Value at							
31st December, 1915	1518	4	6				
£295 11s. 9d. 4½ per Cent. War Loan	287	9	2	3117	1	3	
Balance at credit of Revenue Account				42	0	0	
To PUGH MEMORIAL FUND:—							
Capital—£1070 L. & N.W. Railway 4 per							
Cent. Consolidated Preference Stock:							
Value at 31st December, 1915	1043	5	0	1043	5	0	
Balance at credit of Revenue Account				2	0		
To SAXON SNELL BEQUEST:—							
Capital—£698 4s. New Zealand 2½ per Cent.							
Stock: Value at 31st December, 1915	601	6	6				
£152 17s. 10d. 4½ per Cent. War Loan	148	13	0	750	0	3	
Balance at credit of Revenue Account				44	4	9	
To TITE LEGACY FUND:—							
Capital—£1150 2½ per Cent. Consols:							
Value at 31st December, 1915	678	10	0	678	10	0	
Balance at credit of Revenue Account				47	2	3	
To WIMPERIS BEQUEST:—							
Capital—£1024 18s. 8d. Metropolitan Water							
Board 8 per Cent. "B" Stock. Value							
at 31st December, 1915	791	15	3				
£67 19s. 4½ per Cent. War Loan	66	1	8	857	16	11	
Balance at credit of Revenue Account				117	11	7	
To HENRY JARVIS STUDENTSHIP:—							
Balance in hand				75	0	0	
				£10802	8	5	
SAFFERY, SONS & Co.,							£10802 8 5
Chartered Accountants.							

Examined with the vouchers and found to be correct. 7th April 1916.

{ R. STEPHEN AYLING [F.] }
{ ARTHUR W. SHEPPARD [A.] } Hon. Auditors.

The Council submit an Estimate of Income and Expenditure of Ordinary Funds for the year ending 31st December 1916, exclusive of Entrance and Final Examination Fees:—

Rough Estimate of Income and Expenditure of Ordinary Funds for the Year ending 31st December 1916.

Dr.	ORDINARY EXPENDITURE.				ORDINARY INCOME.			Cr.
	£	s.	d.		£	s.	d.	
Rent, Rates and Taxes, &c.	870	0	0	Subscriptions and Arrears	7300	0	0	
Gas and Electric Lighting	130	0	0	Sale of Publications	300	0	0	
Fuel	70	0	0	Advertisements	400	0	0	
Salaries	3009	0	0	Examination Fees	400	0	0	
General Printing, Stationery, Stamps, and Petty Expenses	700	0	0	Use of Rooms	85	0	0	
General Meetings and Exhibitions	20	0	0					
Housekeeping and Wages	300	0	0					
Advertisements	35	0	0					
Examination Expenses	100	0	0					
General Repairs	150	0	0					
Fire Insurance	40	0	0					
Medals and Prizes	50	0	0					
Grants	350	0	0					
The JOURNAL	1100	0	0					
The KALENDAR SUPPLEMENT	50	0	0					
Contributions to Allied Societies	425	0	0					
Presidents of Allied Societies	35	0	0					
Legal and Accountants' Charges	65	0	0					
Miscellaneous	332	0	0					
Interest on Overdraft	50	0	0					
Special Items:—								
War Committee	100	0	0					
Civic Survey	100	0	0					
Estimated Surplus	353	0	0					
	£8485	0	0					£8485 0 0

THE FABRIC OF ST. PAUL'S, 1760-1810.

Communicated (through Mr. E. SWINFEN HARRIS [R.F.]) by the Rev. R. S. MYLNE, F.S.A., Rector of Furtho, great-grandson of Robert Mylne.

INTERESTING MSS. have been found giving particulars relating to St. Paul's fabric for nearly half a century. As far back as 1752 some settlements were noticed at the great piers under the dome on the south side, and it is recorded: "one of these piers has been once repaired already." Thicker stones were inserted, replacing some of the rubble, or at least this was strongly recommended.

Robert Mylne, the architect of Blackfriars Bridge, took charge of the fabric in 1765 or '66, and was formally appointed Surveyor on 10th January 1767 by the Archbishop of Canterbury, in conjunction with the Bishop of London, and the Lord Mayor. The Archbishop had issued his detailed instructions on 13th October in the year 1766 to the Surveyor now appointed. Considering the particular public interest recently aroused in regard to the safety of St. Paul's, which is a matter of national interest, a few detailed particulars may well be given to the public. The accounts of money paid to the regular workmen are nearly complete for the half-century, and special works are fully described, as they become necessary from time to time.

The statue of Queen Anne standing outside the west front of St. Paul's seems to have suffered some injury from accident or neglect, and was in the year 1771 put in repair. The head of her Majesty even was in a state requiring "additions," while the emblematic figures on the base were in a still worse condition; the figure of Britain received "new arms" to hold the Arms of State, "and an arm with a Spear," and "half the Face." The injuries to France necessitated "one Arm holding the Emblem of the City" and "a hand with truncheon." Our Colony of Guiana in South America received "a new head." A head was also required for Ireland, and her harp "reworked." This was done at a cost to the Cathedral authorities of £200 2s. This well-known statue of Queen Anne was formerly inside the "Fence" or railing round the Cathedral.

In the year 1776 some extensive repairs were done to the "30 Hour Quarter Church Clock." These comprised such items as "Four new Dial Wheels with new Arbours, Three Rowlers and Cocks," a new tail to balance the minute hand, "Turned the Watch Barrell Ratchett to make the Wheels and Pinions ware on the Other Side," new swing wheel and pinion, new pallets, verge crutch and crutch pin, &c., &c. So much, indeed, was done that little was left of the original clock. "A new Wind up Wheel and Pinions to the Quarter and Striking Part, new Pins and Rowlers to the Striking Great Wheel, new Clicks, Ratchetts and Springs to the Flies, new fitted the Snails," and so much more that it seems the clockman of that date could even give points to the men in that trade of to-day in the matter of a good bill. All this was at a cost of £178 14s.

In the early part of 1778 Robert Mylne wrote a long paper "On the fastenings at St. Paul's" as a precaution against robbery, and made careful regulations in regard to the use and locking up of all doors, gates, and chests. Many new bars, bolts, and "Iron Pannelles" were put on order to make all secure.

Five years later, in March 1783, Mr. Gould, the deputy surveyor, makes a report: "Last night the Church was again Robed—the locks in the Dean's Vestry broke open or picked, the lock on the South Door taken off—my Verge gone and some money. The villains got into the Ch. at the West Window over one of the small doors."

Among Mr. Mylne's letters there is a somewhat strange one, not signed: "Sir. Davis, Plaisterer in Blackfriars says, you are confederate with the two fellows that attempted to murder the Banker's Clerk in Water Lane. John Swan news collector to the London Evening Post declares that Davis told him so. This is written so you may do yourself justice. 8 August 1780 If Swan denies it proof shall be given."

In 1781 the south transept was found to need extensive repair, and this was carried out under the superintendence of Robert Mylne. The object was to strengthen the support of the dome at the level of the transept roof and the foundation at the south-west angle.

After eighteen months the church was reopened for divine service in November 1782. More extensive works were found to be necessary than was at first imagined. The western half of the south transept was repaired in 1781, and the eastern half in 1782.

The cornices and impostes of the arches were four or five inches out of the perpendicular, but at the ground level about three inches. "It is a curious problem in Cupola building, for the Cupola itself is as firm and compact as the day it was finished. There is a little more tendency outwards on the South side than on the other sides." A chain bar was fixed on the upper surface of the impost where the great arch covering the south transept springs, beginning at the inner corner of the pier under the inside of the cupola to the south wall, and through the said wall to the outer surface of the south front, where it is strongly fastened to a large iron patera let into the face of a pilaster in the second order of the outside wall. The double chain-bars weighed 11 cwt. Many other chains were fixed in a similar manner. The total cost of these works was £1,917. Lack of space makes it impossible to give all the further details by which the south transept was at this date made secure. But eighteen months of work executed by Robert Mylne preserved the Cathedral intact during the close of the eighteenth century and throughout the nineteenth century. Now there seems need for much new work to completely secure this famous and venerable church.

Lord Salisbury, the Lord Chamberlain of His Majesty's Household, requested special preparation of the church for their Majesties' reception in 1789 on the occasion of the General Thanksgiving in the month of April. The King's recovery was naturally a great cause of rejoicing throughout the land.

In 1797 his Majesty again attended St. Paul's in state to render thanks to Almighty God for the late glorious victory. On the King's entry the guns of the Tower were fired the moment the Te Deum began. The following note is curious:—

"Colonel Smith presents his compliments to Mr. Milne and requests him to let Col. Smith know the hour when it is expected the Te Deum will be sung on his Majesty's entering St. Pauls. Col. S. has sent a quarter Gunner of the Tower with a Camp Colour: which, if Mr. Milne will have the goodness to give directions for the Guards (Corporals say) to be admitted to the Stone Gallery: He will display the Camp Colours at the South side of it: which Colour can be seen by Col. Smith and will be considered as the signal to fire the Guns of the Tower the moment the Te Deum will begin."

TOWN PLANNING.

MR. LANCHESTER'S MADRAS LECTURES.—I.

MR. H. V. LANCHESTER [F.], whose services have been temporarily secured by the Government of Madras to inaugurate schemes of town planning in the Presidency, delivered a series of twelve lectures on the subject in the Madras Engineering College in the month of January last. The first lecture was presided over by His Excellency the Governor, and there were present several distinguished people connected with the Government and a large number of officials employed under Local and Municipal bodies.

His Excellency the Governor having introduced the lecturer, said that of recent years the problem of housing the people in our towns and villages had received increased attention. A desire for improved dwellings and for better surroundings and increased amenities had manifested itself among all classes of the population, and a prosperous exchequer had enabled Government for some years past to devote considerable sums in aid of these laudable aspirations. It was but natural that they should turn for guidance in these matters to the West, where the task of adapting ancient towns to the requirements of a complex modern civilisation had long absorbed the attention of municipal administrators, had given extended opportunities to the activities of the architect, the artist, and the designer, and had called into existence a class of town planning experts, whose special function it was to co-ordinate these activities, and, above all, to harmonise them with the past. In considering the arrangement of the dwellings of our citizens in relation to each other, the lines on which those dwellings themselves should be constructed, so as to meet the demands of the sanitarian and the comfort and domestic requirements of the inmates, must be determined. This was essentially a matter on which Indian experience must help them, and it was in order to elicit their criticisms and suggestions that a collection of various houses and building designs had been made a feature of the recent Exhibition. The Corporation were offering prizes for the best designs for houses to suit various requirements, at monthly rentals of from two to fifteen rupees, and a competent Committee had been appointed to judge them. Ere long, he hoped, they would have at their disposal sugges-

tions, criticisms and constructive proposals, which would materially help their municipal authorities in securing that standard of public health to which sane and prescient planning was essential. They confidently looked to Mr. Lanchester for assistance in the larger task of utilising them in an organic, harmonious and artistic manner.

Mr. Lanchester, taking for the subject of his first lecture "The Ethics of Town Planning," said that the great factor in a city-planning programme was the voluntary one. A city could only become beautiful, convenient, and clean by the united efforts of its inhabitants. A man's own house inevitably received his first attention, but his street may then benefit by the natural extension of his efforts. His family, and especially his children, may take part in these activities. Voluntary local organisation is thus initiated. The old traditions of clean living and the old standards of sanitation only need bringing into relationship with the altered conditions of modern life to achieve a remarkable transformation. If the city is to emulate the glorious cities of the past, all must regard their own activities as subservient to some great united aim. Thus may a new development arise. It cannot come from the mind of one man, however brilliant. The trouble with the expert is that he is almost bound to base his ideals too much on the fine things he is familiar with, not recognising that they may often be exotic and not a true interpretation of needs and character. Those, however, who have actually to make the city—its inhabitants—may rarely have the imagination to realise how those needs may best express themselves—that is where the artist comes in, but his course must be a logical one, based not on his dreams, but on hard facts and on rational requirements. The initiative in regard to these facts and requirements rests with the people; their leaders must endeavour to bring out all the latent aspirations towards a fuller life that they possess, and then call in the town-planner to give material form to the demands this life will make.

In considering the methods by which this can best be done, we may take as types of organisation the army or the school, each at its best, with the assumption that advancement and authority are the rewards of probity and ability, so that each small group has its leader, who, in turn, forms one of a group of his own grade, under a head—Private, Lieutenant, Captain, etc. The gap between the private citizen and the Municipal Council is too great and the usual sub-divisions of the city too arbitrary. Something much more intimate is needed to get the best service out of every one, some smaller area in which to take a special interest, some volunteer leader to direct and advise in regard to this area. Thus the family careful of its home expands into the small community, careful of its district, and the higher officers co-relate the activity of the district to the activity of the ward, while the Municipality is left to deal with those matters affecting the city as a whole. Co-operation in more than an economic sense arises. The lack of this is the reason why it has been found necessary to re-discover, as it were, the so-called art of town planning. This was not consciously an art; it came naturally when communities existed as such and not as heterogeneous and discordant masses of individuals, but now experts have to be called in ostensibly to initiate town-planning schemes, while really the most useful thing they could do is to explain why town planning does not exist, and never will exist until the community in general wake up to the sordid conditions of life around them and make up their minds to live as a community and not as selfish units.

Comparing Indian with European cities, the lecturer

remarked upon the toleration extended towards dilapidations of all kinds in Indian cities. One may see a man meticulously clean in spotless white emerging from a house that to the European eye is appallingly squalid. European ruins even are tidier than many an Indian home. Good sanitary conditions have brought about an immense improvement in European cities. Yet this alone is not sufficient; it is the deadening influence of mechanically organised life that must be combated. The lecturer described the various methods by which this was being achieved in the West, and went on to say that it was open to every man to throw his influence into the scale on the side of the improvement and beautification of the city and all its components. Again, the municipal official must not regard himself as a kind of superior policeman whose main duty it is to look out for infraction of the regulations, but rather as one whose privilege it is to help the townspeople to see where they can help on the progress of their town.

CHARLES HADFIELD.

THE late Mr. Hadfield was engaged in the course of a long professional career upon works both numerous and important, works of a very varied kind, such as fall to the lot of a leading practitioner in a large centre of industry, and one who has besides a connection beyond its boundaries. His most characteristic work, however, was of a somewhat specialised kind, namely, that upon which, whether civil or ecclesiastical, he could bring to bear his wide and sympathetic knowledge of mediæval design. Herein Mr. Hadfield was always something of an enthusiast, though a discriminating enthusiast, and it may be doubted whether any contemporary practitioner in the provinces could point to a body of work of this character so consistently excellent in its quality. To put it in its proper setting, it is desirable to bear in mind the architectural tastes and tendencies of the times during which it was produced.

Entering upon practice in the year 1865 as partner to his father, the late Mr. M. E. Hadfield, well known in the annals of the Gothic Revival, Charles Hadfield found himself in the full stream of the movement, at that time strongly tinted by French and Italian influences. Of this date and phase the Great Northern Hotel at Leeds was an example, but one treated with a reticence only too rare among those who practised this mode. Simple, massive and dignified, it was well suited to its place and purpose; and it is a matter for much regret that consequent on a fire in 1906 the upper stories were rebuilt on fresh lines by another hand, thus completely altering the character of the whole. Another typical design of the same order, but a few years later, was a block of offices in George Street, Sheffield, displaying in its detail a remarkable refinement—a quality the lack of which in the general run of buildings in this style contributed to its ultimate discredit. We shall probably be not far wrong in attributing something of this happy touch to the influence of the late Mr. J. F. Bentley (likewise Yorkshire-born), with whom Mr. Hadfield had formed close ties of friendship while completing his studies in London.

Mr. Bentley was then at the outset of his remarkable career, the end of which alone broke the personal connection. Of much ecclesiastical work undertaken during this first period, it may suffice to mention St. Hilda's Church at Whitby and the *Nôtre Dame* Convent Chapel at Liverpool.

In the course of a few years, a change came over the spirit of the Revival on its æsthetic side, a change marked mainly by a return to less rigorous and more native forms of Gothic. In this fortunate revulsion Mr. Hadfield shared to the full, and, after a transition period, adopted for the most part in Gothic work the Perpendicular and Tudor phases of the style, phases which, in civil and domestic work at least, are best suited to modern usage. It was a type which he cultivated with a singular faithfulness to precedent. Among its earlier fruits were the charming series of Catholic elementary schools in Sheffield, together with the picturesque little country church at Wath, and the larger one at Handsworth—works dating from about 1876 onwards. More conspicuous were such local buildings as the new Corn Exchange, and the business premises of Messrs. Pawson and Brailsford at Church Gates, both in red brick with stone dressings. The last-named certainly stands among the most successful examples of modern Gothic street architecture to be anywhere found; while the Corn Exchange, begun for the Duke of Norfolk in 1878, deserves special remark. Situated, unfortunately, on low ground, and amid surroundings more than prosaic, its picturesque lines and masses—reminiscent as they are of Tudor Oxford and Hampton Court—show to less advantage than is intrinsically their due. The building, however, will repay a close study, were it only for the characteristically thorough and consistent treatment of even the smallest details of design. The great hall (unfortunately now diverted from its original purpose) is a fine and characteristic conception, having an ornate open roof carried on stone columns, while the scheme of heraldry throughout forms an interesting study, illustrating as it does the long connection of the ducal House of Howard with the Town. Much more favourable is the commanding position of the neighbouring Intake Cemetery buildings—also Tudor in style, but of stone, and extremely pleasing in their simpler forms and effective grouping.

It must not be supposed, however, that the Gothic work of Mr. Hadfield was confined to a single period of the style. A notable instance to the contrary occurs in the small Tower Oratory in the St. Marie's Catholic Church at Sheffield.* This is a charming and original composition of Flowing-Decorated character, picturesquely lifted on to an upper level reached from within by a flight of winding steps. Nothing could be more graceful than the management of the whole composition, while the detail is full of beauty. About the same time, a low range of sacristies was annexed, having at the street corner an entrance doorway and

* He brought out, not long after, a *History of St. Marie's Mission and Church*, the latter being one of Messrs. Weightman & Hadfield's fine series of Gothic churches of the mid-century period.

Annunciation-panel of an interesting design. A picturesque clergy-house came in later years to complete the whole of this fine pile of buildings. Another and appropriate variation of style may be noted in the several small School-chapels, &c., at Derwent and elsewhere in Derbyshire, where Mr. Hadfield delighted in adapting to the purpose of the moment the homely character of local sixteenth or seventeenth century work. And then again there was a series of simple Early Gothic chapels and dwellings for the Premonstratensian Canons in Lincolnshire, pleasing examples of the inexpensive treatment called for by the circumstances. These can scarcely be referred to without reviving a regret that plans drawn up for a large and handsome Catholic church in the Minster-city itself should have been eventually set aside.

Among restorations due to him, the historic Manor-house Farm at Intake, associated with the captivity of Mary Queen of Scots, must be mentioned, together with the repair and preservation of the interesting family tombs in the Shrewsbury Chantry of the ancient Sheffield Parish Church.

Many of the above works were carried out during the latter years of the Firm's senior partner, a period during which the influence of the junior was naturally prominent. Hence similar characteristics may be observed in subsequent works erected under other conditions—such works, for instance, as the chapels at St. Ignatius' Church, Preston, recalling in their style and detail Henry the Seventh's Chapel at Westminster; the large Early-Decorated Church of St. James, Bootle, near Liverpool, with a chancel treatment in alabaster and marbles; St. Mary's Church, Wombwell, Yorks; Cairns Buildings, Sheffield, and latterly the rebuilding of Thornbridge Hall, Bakewell, a very extensive work in late Tudor style. Cairns Buildings (dating from 1896), in its quiet composition and detail, stands as an admirable application of traditional English forms to present-day purposes, unspoiled by that straining after effect which mars so much contemporary street architecture. To quite another order belong such structures as the Sheffield Royal Hospital, which leans rather on such broad and simple Italian precedent as was deemed suited for its purpose, studied, however, with the same care and insight as mark the architect's treatment of more familiar modes.

WILFRID RANDOLPH.

Mr. Hadfield, who had been in failing health for some time, passed away at his residence, Park Cottage, Sheffield, on the 22nd March, in his 76th year. The following is extracted from the notice which appeared in the *Sheffield Daily Telegraph* of the 23rd:—"In the passing of Mr. Hadfield, the city has lost a professional man of high standing in the architectural world, and one who, possessing agreeable social qualities, was ever ready to take part in public movements. He was the son of the late Matthew Ellison Hadfield, and the representative of an old

Derbyshire family which had been settled for centuries in the neighbourhood of Glossop. A direct ancestor was the Rev. John Hadfield (of Brasenose College, Oxford), born in 1704, and for forty-five years vicar of Mellor, near Marple, two of whose sons held the livings of Knutsford and Northwich respectively during the latter half of the eighteenth century. The later generations lived at Lees Hall, in the hamlet of Simmondley, and it was from this home that Mr. Hadfield's father came to Sheffield through his connection with the Norfolk estates, subsequently settling in this city as an architect.

"Born in Sheffield in 1840, Mr. Hadfield was educated at St. Cuthbert's College, Ushaw, Durham. He afterwards took up the study of architecture, in the pursuit of which the whole of his life was spent, and almost the whole of his interests were centred. He was articled to the late John Gray Weightman and the late George Goldie, and in 1864 he passed the examination and became an Associate of the Royal Institute of British Architects. He began practice with the late Mr. M. Hadfield in Sheffield. In 1872 a further compliment was paid to his abilities by his election as a Fellow of the Royal Institute, and he worthily upheld the honour, not only by his professional work, but also by his devotion to the interests of that institution when a member of the Council. Nor did he neglect local associations. As one of the founders and Past Presidents of the Sheffield Society of Architects and Surveyors, he helped to create and foster a source of valuable aid to the profession and to the city. For many years he was one of the old Council of the Sheffield School of Art."

Throughout his long career Mr. Hadfield was in close touch with the Institute; he took a deep interest in its various activities, and in his younger days, although living so far away, was in frequent attendance at its meetings. Here as an enthusiastic student he sat at the feet of Cockerell, Barry, Pennethorne, Butterfield, Scott, Street, and (as he once described him) "that admirable, learned, and accomplished man, William Burges." At the Architectural Congress held under the auspices of the Institute in 1900 he brought forward a series of resolutions deprecating the employment of borough engineers and surveyors in the design and erection of municipal buildings. His remarks on the occasion and the long discussion which followed are published in the *JOURNAL* for 1900. He contributed two very interesting Papers to the Transactions of the Institute—the first on the "Restoration of the Lodge at Sheffield Manor," a paper full of archaeological, architectural, and historical interest, read on the 18th January, 1875, and published in the volume of *TRANSACTIONS* of that year, p. 109; the second, a Paper on his friend Bentley's great building, Westminster Cathedral, a carefully written and finely illustrated monograph which attracted considerable notice (*JOURNAL* R.I.B.A., 21 March 1903).

Mr. Hadfield in 1897 was joined in practice by his son, Mr. Charles M. Hadfield [*F.*].



9 CONDUIT STREET, LONDON, W., 15th April 1916.

CHRONICLE.

R.I.B.A. Record of Honour: Twenty-seventh List.

Killed in Action.

BAXTER, ARTHUR CRAVEN (of Guiseley, Leeds), of the 4th London Field Company, R.E. Recently reported killed in the trenches on the Western front.

Mr. Baxter served his articles with Mr. A. Marshall, of Otley. He joined the R.A.M.C. on the outbreak of war, and subsequently transferred to the Royal Engineers.

Died of Wounds.

HARDMAN, ADRIAN T. [*Student*], Lieutenant, Royal Fusiliers. Officially reported died of wounds on 29th March. Aged twenty-five.

Lieutenant Hardman was the only son of Mr. T. and Mrs. E. L. Hardman, of Eastcote, Northaw, Potter's Bar. He was educated at Christ's Hospital, and studied for his profession in the Architectural Association Schools where he carried off the Fourth Year Travelling Studentship. He served his articles with Mr. Frederic R. Farrow [F.], and was afterwards with Messrs. Ernest George and Yeates. He then went to Paris, where he held a good appointment, and was studying for the Ecole des Beaux-Arts when war broke out. Joining the Inns of Court O.T.C., he was granted a commission in the Royal Fusiliers in February 1915, and was appointed bomb instructor. He was promoted to Lieutenant in February last and went to the front.

HARVEY, CHARLES CLELAND: Lieutenant, Argyll and Sutherland Highlanders. Died of wounds. Aged thirty-four.

Lieutenant Harvey was an assistant in the office of Sir John Burnet, LL.D., R.S.A. [F.]. He was well known in antiquarian circles in Glasgow, was interested in heraldry, and wrote a book on the St. Andrew's Cross as the national arms of Scotland. He had also been engaged in compiling a calendar of Yester MSS.

PETERS, KERSHAW: Sapper, Royal Engineers. Died of wounds in France on 18th February. Aged thirty-four.

Mr. Kershaw Peters, of Galway, served his articles with Messrs. Gregg & Detmar, of London. He was afterwards assistant in the Public Works Department, Transvaal, and later assistant with Messrs. Henderson & Pollard, of Auckland, N.Z. Returning to Europe he was appointed Instructor in Building Construction at the Galway Technical School, at the same time entering University College to study for an engineering degree. He passed his first examination with honours, and was pursuing his further studies with equal

success when war broke out. Although he had a young wife and child he volunteered for service, and joined the Colours in 1914.

Missing.

STURGEON, R. V. [*Associate*], Corp., 17th Manchester Regt. Missing since 10th March in France; thought to have been captured while on night patrol work.

Awarded Croix de Guerre.

GROVES, CHRISTOPHER [*Associate*], serving in the French Army as Commandant, Convois Automobiles, S.S.A. No. 5. Awarded Croix de Guerre.

Serving with the Forces.

The following is the Twenty-seventh List of Members, Licentiates, and Students R.I.B.A. serving with the Forces, the total to date being 57 Fellows, 426 Associates, 229 Licentiates, and 272 Students:—

FELLOWS.

Greene, W. Howe: Capt., 2/1 Newfoundland Regt.
(Mr. Arthur Pollard's name was given in the last issue in mistake for that of his son, Major Ernest Pollard [*Licentiate*]).

ASSOCIATES.

Gaunt, Edward L.: 33rd Sanitary Section, R.A.M.C.
Groves, Christopher: Commandant, Convois Automobiles, in the French Army.
Muir, R. O.: R.N.A.S.

LICENTIATES.

Beveridge, D. A.: Artists' Rifles.
Cormack, J. N.: Major, Director of Works, Protectorate of S.W. Africa.
Hunter, J. P.: R.A.M.C.
Pollard, Ernest A.: Major, 5th Bn. West Yorks Regt. (son of Mr. Arthur Pollard [F.], of York).

STUDENT.

Lawson, Edwin M.: 3rd Writer, 6 A.A., R.N.

Promotions.

Major V. A. Flower [*Licentiate*], 13th London Regiment, has been promoted to Lieutenant-Colonel.

Mr. J. N. Cormack [*Licentiate*], who received his commission as Captain in the South African Engineering Corps in December 1914, has been all through the South-West Africa Campaign, and on the country being wrested from the Germans and made a British Protectorate he was promoted Major and appointed Director of Works for the Protectorate.

Lieut. J. Lockwood Hall [*Licentiate*], of the South African Engineering Corps, has been promoted Captain, and is on service in the Protectorate of South-West Africa.

Sergeant H. W. Mann [A.], of the Essex Yeomanry, who was wounded at Hooge, has been gazetted Lieutenant in the 188th Brigade, Royal Field Artillery.

Mr. E. G. Stevenson [*Licentiate*] has been promoted to Lieutenant, Staff for R.E. Services, and retains his position as Assistant Div. Officer R.E. Canterbury, his commission being antedated to May 1915.

An Appeal by the President.

Mr. Ernest Newton, A.R.A., presiding at the Annual General Meeting of the Architects' Benevolent Society last Tuesday, in moving the adoption of the Annual Report made the following remarks in connection with the Society and its activities:—

The Architects' Benevolent Society was established sixty-six years ago for the purpose of assisting architects' assistants, and their dependents, who from one cause and another require help at some stage of their career. On account of the War a very great strain is put on the funds collected for meeting cases—and they are very numerous—of those who, through the almost complete stoppage of building, have suddenly found themselves with very little income in the present, and the prospect of none whatever in the immediate future. It is the duty, and the privilege, of those who are still earning a professional income as well as of those who are in the enjoyment of private means, to assist the less fortunate by every means in their power. I know that in these times everyone feels that he is poor, but this poverty is relative, and we must realise that what we give must cost us something. We should not only make, but *feel* the sacrifice. So far, we have been able to collect enough for our immediate purposes without any appeal to the general public, and, as I said last year, I think we should all prefer to rely mainly on ourselves, but of course if the War is very prolonged it will be necessary to consider the advisability of an appeal to a larger public.

One way occurs to me by which the funds of the Architects' War Committee, which are administered by the Architects' Benevolent Society, may be legitimately increased. Some of us in the far-off days of prosperity have had one or more wealthy clients. Probably an appeal to them would produce a good result, and possibly, before very long, you may be asked individually to undertake this disagreeable task. But we must remember that besides these special funds the Architects' Benevolent Society has a constant need of subscriptions and donations to assist the ordinary cases of distress, which were with us before the War, and which will continue after the War. The difficulties of those who are in receipt of the small help we are able to give them are much aggravated by the higher cost of living, and we must expect to have to advance larger sums in the future.

In conclusion, therefore, let me appeal on behalf of the ordinary funds of the Architects' Benevolent Society and on behalf of the Special War funds to everyone to subscribe something, large if possible, but the smallest gift is acceptable. Since I have had the honour of being President of the Society I have seen something of its inner working, and I can assure you you can give with the knowledge that your gifts will be applied with wisdom, delicacy and tact.

Architects' Benevolent Society : Annual Report.

The Council of the Architects' Benevolent Society, in submitting their sixty-sixth annual report, have to state that the past year has been one of great activity. Owing to the war a considerable amount of work has been undertaken, both directly and indirectly, by the Society in connection with the relief of architects in distress.

The Architects' War Committee, which was established

soon after the outbreak of hostilities, collected in response to an appeal made by the President funds which they have placed from time to time in the hands of the Architects' Benevolent Society for administration. Since the last Report, the Civic Survey Committee having been successful in their application to the Government Committee on the Prevention and Relief of Distress, the scheme of Civic Surveys for the areas of Greater London, South Lancashire and South Yorkshire was started in July. Before the end of the year two grants of £1,000 each were made by the Government Committee, and were administered by the Society on behalf of the Civic Surveys for the payment of salaries, etc. Your Council have further worked in close sympathy with the Professional Classes War Relief Council, with the Professional Employment Committee and the London Society. In consequence of the assistance given by the Government Committee a large number of men have been employed regularly, which has no doubt relieved the Society of burdens it would otherwise have been unable financially to bear.

The funds placed at the disposal of the Society by the Architects' War Committee have made it possible to deal sympathetically with other applications which have been made in direct consequence of the stoppage of architectural work.

As reports of this work will doubtless be published by the various bodies concerned, it is not necessary for your Council now to inform Members further of the position of the Society in relation to the progress of the work.

So far as the special work in which your Society is concerned, the relief of pre-war cases and of widows and orphans has been continued. During the year eighty such applications have been responded to, an amount of £701 10s. having been expended in grants. A further amount of £261 has been paid to pensioners of the Society, making the total amount expended in relief in this way £962 10s. Two pensioners have died within the last year and two other annuitants have been elected and are receiving pensions.

The funds of the Society, notwithstanding the many appeals that have been made in all directions, have been fairly well maintained, the amount received in subscriptions being £636 19s. and in donations and legacies £1,615 3s. 7d. The dividends on investments amounted to £613 12s. 2d. A further sum of £113 1s. was also recovered from the Income Tax authorities. The total receipts of the Society, therefore, apart from the special funds placed at its disposal by other bodies, was £2,968 15s. 9d.

There is a slight diminution in subscriptions, and it is hoped in the coming year that many members who have given donations instead will revert to their former practice. Contributors may be reminded that subscriptions are credited to Income, while donations are placed to the Capital Account, to be subsequently invested in various Trust Securities.

The Capital Account was increased £1,000 by the legacy of Mrs. Arthur Cates, and by the sum of £343 15s. 1d. from the Executors of the late Mr. William Glover's estate, which has now been wound up, and from which there will in course of time accrue to the Society jointly with the Northern Architectural Association a considerable sum as residuary legatees. Towards the end of the year the Council were also informed by the Executors of the late Mr. C. Bertram Bulmer that the testator had made a bequest under certain conditions by which the Society will ultimately benefit. Donations have also been received during the year as follows:—Mr. George Edwards,

£25; Mr. Ernest Newton, £10 10s.; Mr. Arthur Sykes, £10 10s.; Sir William Emerson, £10; Mr. Horace Porter, £10 10s.; Mr. John Bryce, £10 10s.; Mr. Archibald M. Dunn, £10; Mr. Francis E. P. Edwards, £10 10s.; Mr. F. B. Dunkerley, £10 10s.; Mr. Hervey R. Sayer, £10 10s.; Mrs. Flint Clarkson, £10 10s.; Mr. R. M. Lucas, £10 10s.; Mr. W. Campbell Jones, £5 5s.; Mr. Henry Lovegrove, £5 5s.; Mr. H. Chatfield Clarke, £5 5s.; Mr. W. Hilton Nash, £5 5s.; Mr. Percivall Currey, £5 5s.; The Tilers' and Bricklayers' Company, £5 5s.; Mr. Sydney Perks, £5 5s.; The Sheffield Society of Architects, £5 5s.; Messrs. W. and E. Hunt, £5 5s.; Mr. Guy Dawber, £5; Mr. T. R. Bridson, £5; Mr. A. Saxon Snell, £5; Mr. Henry Beswick, £5; and various smaller sums.

To the Special War Fund of the Society the following donations have been contributed:—Mr. E. L. Lutyens, £31 10s.; Sir Aston Webb, £25; Sir Ernest George, £25; Mr. W. D. Caröe, £10 10s.; Mr. Reginald Blomfield, £5 5s.

In the summer of last year an exhibition of paintings, etchings and drawings was held by members of the Imperial Arts League and members of the Institute. The proceeds, in whole or part, were, at the option of the exhibitors, handed over to the Architects' Benevolent Society's War Fund. The Society thus benefited to the extent of £173 16s. 7d. The Council desire to express their grateful acknowledgment both to the exhibitors and promoters of the exhibition.

During the year purchase has been made out of the Capital Account of £1,300 War Loan Stock, at a cost of £1,230 1s. 9d.

A War Loan Fund has also been established and a committee appointed to administer it.

The Council have to announce with great regret the death of their senior Vice-President, Mr. H. L. Florence, and Mr. J. Macvicar Anderson, one of the Trustees and at various times a member of the Council. They also regret to announce the death of Mr. C. Bertram Bulmer.

The following, being the five senior members, retire by rotation from the Council: Mr. Henry Lovegrove, Mr. William Grellicr, Mr. C. R. Baker King, Mr. Andrew T. Taylor, Mr. W. D. Caröe. To fill the vacancies caused by these retirements the Council have the pleasure to nominate Sir John J. Burnet, Mr. William Woodward, Mr. Arthur Ashbridge, Mr. A. Saxon Snell, and Mr. Lewis Solomon.

In concluding the Report the Council wish to urge upon all those in a position to do so the necessity of supporting the Society in its effort to relieve the distress of their poorer brethren and those dependent on them. It is hoped that there will be no further decrease in subscriptions and that members will endeavour to obtain the support of those who have not hitherto subscribed.

Arterial Roads in Greater London.

The following correspondence has passed between the Royal Institute and the London County Council:

6th March 1916.

To the Clerk, London County Council,—

DEAR SIR,—The Council of the Royal Institute of British Architects have had under consideration the proceedings at the Conference of Local Authorities and Professional Societies which was held recently at the Local Government Board on the subject of Arterial Roads in Greater London. Doubtless the London County Council fully realise the great importance and

necessity of reserving these routes, large portions of which are within the London County area, and my Council therefore venture to express the hope that the principle of reserving these routes may have the sympathy and support of the London County Council.—

Faithfully yours,
IAN MACALISTER,
Secretary.

[Reply.]

Spring Gardens, S.W., 23rd March 1916.

To the Secretary, Royal Institute of British Architects,—

SIR,—With reference to your letter of the 6th instant on the subject of arterial roads in Greater London, I am directed to inform you that the proceedings of the conferences on arterial roads have received, and will continue to receive, the most careful attention of the Council, which appreciates the importance of the question of the reservation of arterial traffic routes in London and its environs.

Having regard to the conditions created by the war, the Council considers that the present time is inopportune for making progress with schemes in which considerable expenditure would be involved; and I am to add that, when normal conditions are resumed after the war, the question of arterial roads will engage the Council's earnest consideration.—Your obedient servant,

JAMES BIRD,
Clerk of the Council.

The R.I.B.A. Collection of Drawings.

At a recent meeting of the Council of the Northern Architectural Association the following Resolution was agreed to, and was ordered to be communicated to the Council of the Royal Institute: "This Association, having learnt, with pleasure and satisfaction, that a considerable accession has been made to the Royal Institute of drawings of past masters of the art of architecture, recognises their immense value as a national asset of art, and suggests to the Council of the Institute the propriety of publishing from time to time reproductions of these drawings, in a similar manner to those of William Burges [JOURNAL, 19th February]—this for the purpose of further linking up the Country Members with the Institute. Members frequently find it inconvenient, and others find it impossible, to get up to London to study these works; and this Association further believes such a scheme would result in a much closer bond in all members of the profession."

The resolution was laid before the Council of the Institute at their Meeting on the 3rd inst., and it was agreed that reproductions of some of the drawings should appear in the JOURNAL from time to time when space permits.

Home Problems after the War.

Some four hundred representatives of local authorities in Great Britain, and of societies interested in housing, have met this week at the Congress held at Caxton Hall, under the auspices of the National Housing and Town Planning Council, to consider Home Problems after the War. Mr. Harold Shaw-

cross, Chairman of the Council, who presided at the opening meeting on the 11th, explained that two of the main objects of the Congress are to prevent unemployment and to ensure that the nation is prepared to cope with the enormous demand for more working-class cottages that must accompany and follow the demobilisation of the Army when peace is declared. By slow demobilisation the danger of flooding the labour market with labour could be avoided, but the cost would be very great. The Housing Council, therefore, urged the preparation in advance of building schemes involving the performance of work of real use to the community. Mr. B. S. Rowntree and Mr. S. Smethurst (Past President, National Federation of Building Trades Employers) both spoke of the urgent duty of taking some such steps to prevent widespread unemployment at the close of the War. The very serious shortage of good cottages to which the men can return was emphasised by Mr. A. G. Cameron (Amalgamated Union of Carpenters and Joiners). During the discussion several speakers maintained that private enterprise had utterly failed to meet the demand for working-class homes. It was retorted that that was because private enterprise had been hampered by legislation.

The following resolution was carried: "That this Congress is of opinion that the legislation promised by His Majesty's Government in 1913 and again in 1914 with regard to the Finance Act of 1909 should be now carried out in order that an admitted obstacle to the building of working-class houses may be removed and the provision of such houses stimulated at the close of the War." A resolution urging the necessity of simplifying and cheapening the transfer of land so as to encourage the building of houses for the working classes was also approved.

Among Papers of special interest to architects read at the Congress was one by Mr. H. L. Paterson [A.], of Sheffield, on "The Possibility of Adopting New and Cheap Building Materials and securing Economies in the Design of Cottages, provided that the Essential Standards of Good Building Construction and of Wholesome Environment of Dwellings are not impaired." Mr. Paterson dealt with the provision of bedrooms, parlours, etc.; the abolition of back additions; the avoidance of long rows; the treatment of fronts and backs; walls and external finishings; heights of rooms; roof-coverings, windows, fireplaces, chimney stacks and flues, foundations and footings, internal wall and ceiling finishings, internal fittings, internal partitions, etc.

Professor S. D. Adshad [F.] read a Paper on "The Regeneration of the Village," dividing his subject into three heads: (1) Agricultural Methods and Farming; (2) Transport and Marketing; (3) Labour and Housing. Many of our old villages, he said, are in appearance and in regard to natural amenities all that could be desired; they merely require restoring, white-washing and resuscitating as regards their social life. Many of them have been spoiled by features that, introduced without adaptation from the towns, clash

horribly with rural life. The village, its planning, its buildings, and its inhabitants must have a rural character quite different from that which is suitable to the town.

Among other Papers read were: "New Developments in a National Policy in regard to Slum Destruction, the Suppression of Overcrowding, and the Housing of the Poorest," by Mr. Henry R. Aldridge, Secretary of the Council; "The Future of Housing in Mining Districts," by Mr. T. H. Cann (Durham Miners' Association), Mr. T. Eustace Hill, M.B. (Durham County Medical Officer), and Mr. W. Straker (Northumberland Miners' Association); and "Methods of Dealing with Insanitary Houses in Rural Areas," by Dr. Wm. G. Savage (Somerset Medical Officer).

On Wednesday a resolution was passed urging upon the Government "to set aside no less than £20,000,000 to make such advances to local authorities and other agencies as will enable them to provide houses at reasonable rentals, having regard to all necessary and equitable circumstances and conditions." "We want the plans now," Mr. Henry R. Aldridge said, "so that when the men come back after the war we can be spared the unspeakable shame of men walking the streets without work to do."

Mr. Harold Shawcross, who presided, read a Paper on "Suggestions for a New Housing Policy." One of the suggestions he offered was a scheme of co-partnership between local authorities and tenants. Local authorities, he considered, should have power to lend money to public utility societies, and, on certain conditions, to builders, for housing the working classes.

Mr. H. Aldridge moved that the Congress should urge all parties in the State to introduce legislation: (a) To set up machinery in all industries to require employers to pay wages sufficient to ensure decent housing accommodation for their workers, and (b) To secure that where such raising of wages can only be achieved by stages the local authority shall provide decent housing accommodation for the poorest, and that the country shall bear the difference in the cost between the rent of the decent dwelling and that which the tenants can afford to pay.

William Henry Lynn, of Belfast.

Quarterly Notes, issued by the Belfast Municipal Art Gallery and Museum, contains a Catalogue of the Exhibition of Works (now being held at Belfast) by W. H. Lynn, R.H.A., the well-known Belfast architect, who died last September, and his brother Samuel Ferres Lynn, the sculptor, who died in 1876. The exhibition consists of drawings and water-colours by W. H. Lynn and works of sculpture by his brother. Some interesting notes on the Brothers Lynn are contributed by Dr. Kyle Knox, who gives the following account of the origin of one of the drawings now on exhibition:—

When the erection of a Cathedral in Belfast was decided on, Sir Thomas Drew (undoubtedly an eminent ecclesiastical architect) was selected to design the building. He (Sir Thomas) informed me that he was actually engaged on the task, and was preparing sketches in the Gothic style, when Mr. Lynn called on him. He assured Sir Thomas Drew it would be impossible

to raise funds adequate to execute any such work as that which he contemplated. Sir Thomas asked him to suggest something different. Mr. Lynn pinned a sheet of tracing-paper on a board and in less than half an hour produced the drawing now being shown (No. 6). It represents the West front of a Cathedral in Romanesque style. Sir Thomas was so struck by the effect of that sketch, and its original and striking character, that he based on it the design which has been adopted. With his usual modesty Mr. Lynn refused to have his name associated with that of Sir Thomas in the work (as Sir Thomas Drew wished), but he took intense interest in it, and was constant in attention to its progress. The west window was erected and filled at his own expense. The Baptistery which is intended to be added is from his designs, and it is well known that he has bequeathed £5,000 towards the completion of the Cathedral.

The New Architect Associate of the R.S.A.

At a recent meeting of the Royal Scottish Academy Mr. James A. Morris [F.J., F.S.A.Scot., was elected an Associate. Among Mr. Morris's works are the Art Schools at Ayr Academy; St. Ninian's Church at Troon; St. John's, Wallacetown; Hinton House, Northamptonshire; Conheath House and private chapel, Dumfriesshire; and Savoy Park, Ayr. He carried out the architectural work in the preservation of the Auld Brig of Ayr, and restored Crossraguel Abbey and the Girwan Memorial Gateway.

OBITUARY.

Edward John Woods [*Fellow*, elected 1892], of Adelaide, South Australia, died on the 5th January last. His partner, Mr. W. H. Bagot [A.], writes: "Both personally and professionally Mr. Woods honorably maintained the status of the Royal Institute of British Architects, of which for a long period he was the only local representative. In practice for over fifty years, and for ten years in the Government service, finally as architect-in-chief, he had for long been recognised as the *doyen* of the profession in the State, and had designed or carried out the greater number of its chief buildings, notably the Parliament House and the Anglican Cathedral of St. Peter. He received his training in the office of C. J. Richardson, the writer on the Elizabethan Period, but in his personal style he was a follower of Viollet-le-Duc. His mastery of technical methods was unusual and of great service to a young community."

Frederick William Lacey, M.Inst.C.E., Borough Architect and Surveyor, Bournemouth, whose death was recently announced, was elected Fellow of the Institute in 1898. He was articled, in 1872, to the late John Wimble, of Queen Victoria Street, E.C. From 1875-79 he was assistant, first in the office of Mr. John Johnson, of Queen Victoria Street, and afterwards with Mr. Goymour Cuthbert, of Queen Street, E.C. In 1879-80 he travelled in the United States and studied constructional ironwork. He started practice in 1881 at Brentford and Cecil Street, Strand, his early works including Public Offices, Brentford; Post Office Buildings, Brentford; Castle Hotel, Brentford; Wayside Inn, Ealing; Hotels at Willesden, Wandsworth and Kensal Green; and the

Sludge Pressing Works, Brentford. In March 1889 he was appointed Town Surveyor of Bournemouth, and later Borough Architect and Engineer. Mr. Alderman H. Robson, Mayor of Bournemouth, at a meeting of the Town Council on 4th April, paid generous tribute of admiration and respect for Mr. Lacey's administrative talent, his engineering and artistic genius, and his high personal qualities. The works, he said, which Mr. Lacey had carried out for them cost £1,050,800, and the purchase of land and property £87,000. He practically reconstructed not only the main drainage, but the whole of the subsidiary and surface draining and the re-making of the main roads. Other important works were the rebuilding and enlargement of the refuse destructors, frequent enlargements of the hospital, the design of the three main fire stations and the three sub-stations, extensive stables, workshops and depots—all arranged with admirable foresight and adapted to the growing needs of the town. In laying out the Poor Common, now known as Meyrick Park, Mr. Lacey gradually transformed a barren waste into one of the most beautiful parks in the country. The Queen's Park and King's Park were similarly transformed. A drive through these parks, said the Mayor, could not fail to impress the most casual observer with the perfect taste and wisdom with which they had been laid out and the admirable manner in which all picturesque and characteristic features had been preserved and intensified. His advice was almost invariably sought by the ground landlords in the laying out of estates for building, notably the Talbot Estate, Boscombe Manor Estate, the Carberry Estate, &c. The 650 acres of pleasure grounds laid out under his supervision have become as they have matured a most delightful feature of the town and neighbourhood. As an architect his most important works at Bournemouth are the Municipal College and the Law Courts. His plans for the Pavilion have recently passed the Local Government Board, and this the Mayor referred to as Mr. Lacey's greatest achievement, particularly if its unique setting is further enhanced by the developments of the Plateau as planned by him, and extending from Gervis Place to the sea. As regards his personality, the Mayor said that they had not to wait until Mr. Lacey was taken from them before they knew him to be an English gentleman in the fullest sense of that grand designation. He hated shams and pretensions. He declined to be associated with anything but the best work. For twenty-seven years he had carried out very much of the administrative work under many Acts of Parliament and the resolutions and by-laws of the Council; he had always safeguarded their interests in contracts and secured the best possible service from the numerous employees in his department. In conclusion the Mayor moved a resolution expressive of their deepest sympathy with the widow and family and of appreciation of Mr. Lacey's inestimable and faithful service to the borough. It was further resolved that his portrait should be framed and hung in the Council Chamber.

NOTICES.

Annual General Meeting, 1st May.

The ANNUAL GENERAL MEETING will be held Monday, 1st May 1916, when the Chair will be taken at 4.30 p.m. precisely, for the following purposes:—

To read the Minutes of the Special General Meeting held Monday 27th March 1916; formally to admit Members and Licentiates attending for the first time since their election.

To consider the Annual Report of the Council for the official year 1915-16 (printed on foregoing pages, and copies of which will be available at the Meeting).

Professional Conduct.

The Council at their Meeting on Monday the 3rd April passed the following Resolution:—

"That the payment by any Member or Licentiate of the R.I.B.A. of a fee or commission to any person in respect of his good offices in introducing work is unprofessional, and on all grounds to be avoided."

The Council have ordered this Resolution to be added to the Professional Conduct Regulations, published in the R.I.B.A. KALENDAR, p. 70.

Election of Members.

In accordance with the provisions of By-law 8, the names and addresses of applicants for candidature are published herewith for the information of Members. Notice of any objection or other communication respecting them must be sent to the Secretary R.I.B.A. for submission to the Council prior to Monday, 15th May. The day of election is Monday, 5th June.

As FELLOWS (6).

FARROW: GEORGE REGINALD [*Associate* 1908]; Amberley House, Norfolk Street, Strand, W.C.; and "Dinant," 75 Downton Avenue, Streatham Hill, S.W.

VARNDELL: CHARLES EDWARD [*Associate* 1900, *Grissell Medalist* 1900]; 1 Whitehall, S.W.; and "Foxcote," St. Leonards Road, Surbiton.

Together with the following Licentiates who have passed the qualifying Examination:—

CRATNEY: EDWARD; 88 Station Road, Wallsend-on-Tyne; and Rose Hill, Willington-on-Tyne, Northumberland.

LOVEGROVE: GILBERT HENRY; 374-378 Old Street, E.C.; and 72 Hornsey Lane, Highgate, N.

POULTER: BRIANT ALFRED; Craig's Court House, Whitehall, S.W.; and "Old Dean," The Chase, Coulsdon, Surrey.

THOMSON: JAMES; City Architect, Dundee; 324 Blackness Road, Dundee.

As ASSOCIATES (11).

[All candidates passed the Qualifying Examination last year.]

CHEEK: CYRIL CLIFF [S. 1912]; 36 Crockerton Road, Wandsworth Common, S.W.

COLBECK: HENRY [S. 1909]; c/o Messrs. Moore Smith & Durrant, 14 Union Court, Old Broad Street, E.C.; and 26 Bramley Road, Ealing, W.

FYFE: JAMES SIMPSON [S. 1913]; City Architect's Office, Town Hall, Sheffield; and 147 Hunterhouse Road, Eccleall.

GALT: CHARLES HENRY [*Special Examination*], M.I.C.E.; Public Works Department, Hong Kong, China.

GEE: ERNEST [S. 1913]; Cathedral Chambers, Chester; and 8 Belvidere Road, Gt. Crosby, Liverpool.

HILL: CLAUDE EDGAR [S. 1911]; 1/2nd London Sanitary Co. R.A.M.C. (T.); and 35 Collegiate Crescent, Sheffield.

HULL: JAMES VINOENT [S. 1913]; "Lothouse," near Gars-tang, Lancashire.

PICTON: CLARENCE SPENCER [S. 1913]; 13 Queen Anne's Gate, S.W.; and 73 St. Donatt's Road, New Cross, S.E.

RAINGER: HERBERT THOMPSON [*Special Examination*]; Sibbersfield, Charlton Kings, Cheltenham.

ROUGH: JAMES WILFRED [*Special Examination*]; Invercargill, New Zealand.

VINDEN: GILBERT [S. 1912]; 57 Eastern Avenue, Reading.

Additions to the Library.

During the suspension of the Supplements to the JOURNAL the lists of Additions to the Library and Collection will cease to be circulated as hitherto. The lists, however, have to be printed for Catalogue purposes, and a few extra copies are struck off for Members who have been accustomed to file the lists. Application for them should be made to the Librarian. The usual summary of the year's Additions will appear in the JOURNAL for October.

Licentiates and the Fellowship.

The next Examination of Licentiates desiring to qualify for candidature as Fellows will take place in July. Applications for admission must be sent in before the end of May.

The Examinations: Intermediate, Final and Special.

The Council give notice that these Examinations will be held once only this year, the Intermediate from the 2nd to the 9th June; the Final and Special from the 22nd to the 30th June.

Applications, with Testimonies of Study, &c., for the Intermediate must be sent in by the 15th April; for the Final and Special by the 6th May.

Discontinuance of the Preliminary Examination.

The Preliminary Examination for the registration of candidates as Probationers will be discontinued.

Candidates for Probationership will for the future be required to submit certain certificates, full particulars of which were given in the JOURNAL for 4th March, and to be obtained from the Secretary R.I.B.A.

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THE MONUMENTAL ART OF ANCIENT EGYPT.

By G. BALDWIN BROWN, M.A. [*Hon. A.*], Professor of Fine Art, University of Edinburgh.

THE word "monumental" may be taken in a quite general sense as merely meaning "architectural" or "public," or it may be used with a more particular significance. It is employed here in a special meaning, and this should at the outset be fixed.

"Monumental" is, in the mouth of the architectural critic, a word of praise, but it is not naturally used of some of the acknowledged masterpieces of the constructive art. We do not commonly choose this word to describe a Greek temple like the Parthenon, or a Gothic cathedral such as Rheims, but we apply it freely to the characteristic structures of the Romans and to some classes of Renaissance and Neo-Classic buildings of more modern times. The truth is that the term implies an emphasis laid on certain special qualities the impression of which is made predominant, whereas buildings such as those first mentioned exhibit a perfect balance of qualities, which forbids our singling out any one or any one set of these for particular attention.

The special qualities here referred to are, of course, those of magnitude and mass, though not of mere bulk. For a structure to appear monumental it must be handled with a studied reference to the particular effect desired, and must possess that consistency of treatment which results in the impression of style. Sometimes it will be that the one essential quality of vastness is brought out through an austere rejection of architectural graces, at other times the elements that make for greatness will be deliberately exaggerated, and in contrast other equally valuable æsthetic qualities consciously depreciated or even sacrificed. The Romans achieved monumental quality in their great engineering structures through the austerity of treatment just spoken of. These were primarily things of utility, and make no direct pretence to æsthetic quality, yet they are at the same time productions of art and are really the best things in art that the Romans have left to us. They exist entirely, one feels, to do their work; but for this work they are endowed with a solidity which is even greater than the need demanded, and with

the finest materials and technical treatment that could be compassed. A workmanlike bareness and simplicity accord with this purposeful air, but at the same time there has been operative the effort, consciously realised, or as it were in the background, to emphasise the look of dignity in the structure; and this in part by the added solidity and the fine quality of the materials, and in part by the addition to the monument of a memorial arch or an inscription, which expounds its character and gives it its place in the history of the public affairs of the City. Utilitarian in intent as the structure may be, it is yet ideal in its expression of Roman imperial majesty. The Romans discerned a utility in display, and there underlies the massiveness of the great engineering monument a distinct æsthetic intention. One classic example is the Pont du Gard, near Nîmes. This is austere simple, but there is a distinct architectural feeling for proportion in the relations of the openings, which are adjusted with a good deal of subtlety, so that there results a nice play of forms. In structures of the kind architectural details, in the form of bases, capitals, imposts, string-courses, cornices, are sometimes almost, but never entirely, absent, and are in any case used very sparingly, but often with a very just judgment. The Romans did not excel in refinement of details such as the profiling of mouldings, but their work bears testimony to the immense æsthetic value of the accent given here and there by a detail to important points of structure, and of the marking off of part from part in a complete whole even by the simplest string-course.

Monumental expression is thus given to these characteristic Roman structures, these causeways, bridges, aqueducts, by a reserved architectural treatment guided by a fine sense of style. At other periods the effort after the effect of greatness has been too obvious, and an impression of exaggeration has resulted. Among Early Renaissance structures are many to which this applies, and that the idea of the monumental was an obsession in the minds not only of architects but of thinkers and workers in many fields is proved by the literature as well as the buildings of the period. Rabelais' Abbey of Theleme, with its nine thousand three hundred and thirty-two rooms, its libraries, theatres and recreation halls, is the most famous example of the ideal palace schemed out in imagination, to suit the amplitude of the human personality developed by the humanistic culture of the age. On a lesser scale, but still carrying the grandiose to its extreme possibilities, were the actual structures of the period, such as Brunelleschi's Pitti Palace at Florence, and sundry buildings both in France and England which, domestic in their intention, deliberately sacrificed the home-like feeling of a house to the imposing effect of vast proportions, widely flung wings, windows too large for comfort, and staircases that hunger for processions. The Neo-Classic epoch, following on the spacious times of the earlier Renaissance, was animated by a similar predilection for the monumental, but practised self-control, and secured a unifying effect of style that precluded exaggeration. A good deal of the work of the Brothers Adam is here characteristic. It is somewhat curious that Mr. A. E. Richardson, in his *Monumental Classic Architecture*, where he makes some sound remarks about the monumental style in general, denies to the Adams this particular quality which one would describe as of the essence of much of their work. "They belonged," he writes, "to the ornamental rather than to the monumental school," and speaks of their "sacrificing grandeur of conception to an elegant mannerism." It is true that in the South, where the architects had to express themselves in brick, the decorative detail that goes by their names is very prominent in the effect of their work; but even here the designers of Portland Place, where so much valuable land is sacrificed at the altar of the imposing, show themselves distinctly devotees of monumentality. In the North, where they disposed of magnificent building stone, the monumental character of their design, as in the Edinburgh University buildings, is forced on the attention. Charlotte Square is a conspicuous instance of the deliberate insistence on the quality. The noble north block is particularly effective, as the golden hue of the stone tells out so beautifully in the sunlight. Here, as in other examples of the Adams' domestic work, a group of single dwellings is treated so as to look like one palatial block. The real character of the structure is ignored; no expression is given to the independence and self-containedness of the separate domiciles, and they

are merged in a general mass that, imposing and beautiful in itself, is not the externalisation of the idea and character of the fabric.

For a building to merit the term "monumental" something more is wanted than mere size. Loosely designed edifices of multitudinous parts may, like some of the Early Renaissance palaces above referred to, cover a vast extent of ground, but their want of consistency and style offends the æsthetic sense. Other fabrics, like the modern business blocks in American cities, tower to a prodigious elevation and are certainly consistent in the monotonous repetition of their parts, but as yet they have not attained to the dignity of style. Their designers have not yet made the buildings as a whole the expression of their character and construction, while preserving a Roman sense of proportion and a due accent in details. The same is the case with structures of the engineering class already referred to. The Forth Bridge is big enough, but the praise implied in the epithet "monumental" is not its due, whereas the Britannia Tubular Bridge, though much smaller, is truly monumental owing to the æsthetic treatment accorded to it by its designer. The noble tradition of the artistic handling of utilitarian structures on Roman lines survived for a time the introduction in the late eighteenth century of iron as a material for such fabrics, and Telford's Menai Suspension Bridge, with Rennie's Southwark Bridge in London, are or were as fine examples of monumental qualities in design as their famous structures in stone. The Roman tradition in such matters has apparently died out completely in our own time, and a cynical disregard of these æsthetic considerations marks the present generation of British engineering constructors.

The principle that size is not the criterion of the monumental applies in ancient Egypt. The tourist is there chiefly impressed by two buildings, the Great Pyramid and the Temple at Karnak, and he generally accords to each the same tribute of awe and admiration. But, æsthetically speaking, the two buildings are very different, and it is by no means necessary to place Karnak, or any New Empire structure, on the same artistic level as the older work. The latter, as we shall see, perfectly fulfils the conditions of the monumental. It possesses prodigious mass treated by the constructor with the most austere self-abnegation in the refusal of ornament and details, and is the very embodiment of style. The former, the Temple of the New Empire, possesses mass only in the mechanical sense of a vast number of cubic yards of stonework, but there is no such treatment of the mass as to convey the impression of the monumental. It has abundant detail and a superfluity of ornament, but the various parts have not passed through the crucible of the imagination to issue thence worked into an harmonious unity.

In the famous hypostyle halls of the Egyptian temples the supports are far too crowded, so that the effect of an interior is quite lost. They are immeasurably too numerous and too bulky for the work they have to do in supporting the roof, while the form of them suggests soft and yielding rather than rigid material. We may compare them with the Doric column of the Greeks. In both cases the original support was of plant origin, in Greece the tree-trunk, in Egypt the tall and swaying stem of the papyrus, or even at times the pulpy and succulent stalk of the water-lily; but when the Greeks transferred the plant form to stone they petrified it, so that it boars a thoroughly lithic character. The Egyptians contented themselves with preserving the shape and character of the plant stem and only copying it on an immense scale of enlargement in stone. Hence the form and the material are out of accord, and the effect of the corpulent Egyptian column is that of a gigantic and overgrown baby. The most effective part of the Egyptian temple is after all the pylon, for this, though crude enough, is in its frontal aspect a sort of crystallisation of the vertical cliffs bounding the Nile valley, that form the background of every Egyptian landscape. Similarly, the obelisk is the crystallisation of the upright unwrought stone or menhir. As such the pylon and obelisk come more or less into line with the pyramid and mastaba of the Old Empire, which are crystallisations of the mound or tumulus, the most natural and most primitive funeral monument.

It is on this derivation that is based the monumental character of the sepulchral structures of the

Old Empire. They are very near to nature, but exhibit the rude and inchoate masses of nature transformed into productions of human intelligence. Between them and nature is interposed, as an intermediate stage, the rude stone monument. The heap of stones or mound of earth, the menhir, the dolmen, are not purely natural products, because the materials have been disposed by human hands for a rational purpose, but the materials themselves are just as nature made them. In the old Egyptian mastaba and pyramid and pyramid-temple these materials have been taken up and fashioned into exact and regular shapes, while at the same time their primeval aspect is carefully maintained through the absolute simplicity and bareness of their forms, and through their colossal size which associates them with the appearances of nature.

Shakespeare, in the lines in *The Tempest* beginning "The cloud-capped towers," evinces the most profound knowledge of the conditions of monumental effect in architecture when he brings human structures into line with the phenomena of the material creation. The epithet "cloud-capped" applies properly to the mountain peak, and to transfer it to the structure of mortal hands is an immense exaltation. Still more so is the effect of the collocation: "The solemn temples, the great globe itself," as if the human monument were comparable with the solid mass of the earth. These lines might have been written under the shadow of the Great Pyramid or of the Sphinx, for Nature has indeed lent to these incomparable works her own majesty, while on the other side human reason has permeated them in every part, and by its complete mastery of them has stamped them with the impress of style.

The square mile of desert rock and sand that is the site of the so-called cemetery of Ghizeh, opposite Cairo, is for the student of the monumental the most sacred ground in the world. There is a great deal more of interest upon it than the Great Pyramid, or than the three great Pyramids which bulk so largely in the eyes of the visitor to Cairo. The cemetery has to be studied as a whole, and upon the relations of the various structures it enshrines not a little new light has recently been shed. Each of the three royal tombs has its own adjuncts of structural and of religious interest, and, besides the royal mausolea, grouped round and in relation to these are innumerable sepulchres of the nobles in the form of what is known as the mastaba tomb. The arrangements of the upper world are here reproduced, and just as in the capital of the Empire there would be a royal quarter with quarters of the Court retainers disposed about it, so in the cemetery the king lies in his tomb encompassed with the graves of all his company. These mastaba tombs, moreover, are arranged in regular streets, crossing each other at right angles and oriented north and south, east and west, in the same directions as the Pyramids. The whole cemetery may in this way be regarded as the oldest example of town-planning in the world, for the orthodox Oriental rectangular scheme is entirely in evidence.

The mastabas are of great constructive significance, for they appear to reproduce in a regular form the heap of sand fenced round with a wall of mud brick that formed the visible memorial over the earliest known tombs of a monumental character at Abydos. On the other side we can see in them the prototype from which the pyramid itself was destined to be evolved. The pyramid at first sight looks like a direct copy in crystalline form of the symmetrical cairn or mound of stones or earth heaped over the body of the departed chieftain, but the shape has not been arrived at so directly as this would imply. There is the clearest evidence that it grew out of the mastaba. The latter, it is true, is oblong in plan, while the pyramid is square. It so happens, however, that there have been preserved two earlier pyramids than the fourth dynasty ones at Ghizeh, and these are both oblong in ground plan, while they possess other mastaba characteristics. These two are the third dynasty pyramids at Meidum and at Saqqara, the latter the well-known Step-pyramid that has obviously reached its present form through a process of accretion. The Great Pyramid of King Chufu is the first that is on a square plan, and that was systematically constructed throughout in this regular form. The consistency and accuracy of the workmanship are as remarkable as the vastness of the scale, and as regards the last few ever fail to be astounded when they plot its ground plan on to a part of a town they are familiar with, or work out a comparison between its mass and that of structures known to them.

These austere simple unadorned cones of perfect masonry did not rise, as we see them rising to-day, directly from the shifting desert sands. Round each was a level terrace of massive stonework of no great extent, from which its sides ascended in their smooth unbroken slope, and which was bounded at a little distance from the monument by a wall of enceinte marking the area of the terrace as a sacred temenos. The so-called "determinative" of the pyramid, the sign that stood for it in the hieroglyphic writing, always shows what looks like a plinth or platform at the base of the cone, and this is most probably the view of the elevation of this wall of enclosure. In the case of the pyramid of Chufu there are still to be traced the remains of a monumental adjunct in the form of an immense causeway of stone constructed for the conveyance of material from the edge of the Nile inundation up to the site of the monument. Herodotus tells us that it took ten years to the pyramid's twenty, and he regards it as almost as great a work. It is in the case of the second pyramid, however, that of King Chephren, that we can form the best idea of the subsidiary structures that were grouped with the actual tomb to form a grand complexus of related monuments.

The Chephren pyramid is only a few feet lower than that of Chufu, and two million cubic metres of stone went to the making of it. It has preserved as a sort of cap near the summit substantial portions of its original casing of fine limestone blocks, that were fitted and smoothed with the utmost precision, and gave a finish that accentuated the regular crystalline flawlessness of the monument, and stamped it as a work of refined intelligence. It possessed, of course, its terrace and more than one wall of enclosure marking off enceintes of graduated degrees of sanctity. It is specially fortunate, however, in the retention of its religious adjuncts in the form of temples dedicated to the worship or cultus of the deified monarch. Recent investigations carried out by Professor Borchardt in connection with the group of pyramids at Abusir, between Ghizeh and Saqqara, have supplied this archæologist with grounds for constructing a scheme of pyramid adjuncts, which at any rate introduces a unifying principle among monuments that had hitherto been treated independently. This scheme applied to the second pyramid at Ghizeh brings into close connection with the royal tomb the well-known but enigmatical building called the Temple of the Sphinx or the Granite Temple, and also the Sphinx itself, which is now claimed as contemporary with the pyramid and as an idealised portrait of King Chephren himself.

Borchardt's theory is based on the necessary existence of a causeway for the transport of material from the valley to the site of the actual tomb on the edge of the tableland bounding the valley. He claims to have discovered remains of stone-built quays at which were landed the blocks of granite from Assuan as well as those of limestone quarried on the eastern side of the valley at Tura, and wafted across on the waters of the inundation, which at that time filled the intervening space. From the quay the causeway led up to the actual site of the pyramid, and followed a line marked for it by the topography of the region. Facing the quay, however, and forming the starting-point of the causeway, was a monumental structure of the nature of a portal that he calls the "Thorbau im Thale," the "portal in the valley," from which the approach to the tomb began. When the construction of the latter was complete the portal building was altered and elevated in character, so as to become a sort of outer temple devoted to the glorification of the monarch, and impressing the votary bound for the august sepulchre with the majestic associations of the place. The causeway was now turned into a covered passage leading upwards towards the pyramid and terminating in front of this in a temple of monumental size that abutted on the actual tomb. In the case of the second pyramid this theory of Borchardt's has been applied by an archæologist of the same school, Dr. Hölscher, with the results embodied in an interesting work the title of which is given below.* The Temple of the Sphinx becomes the "Thorbau im Thale" dedicated later on to the cultus of the king. The Sphinx itself is the king in lion form, and guards the approach to the royal necropolis. This monument is between a quarter

* *Das Grabdenkmal des K. Chephren.* Leipzig, 1912.

and half a mile from the actual pyramid, and the covered way, starting as it now does from the north-west corner of the Granito Temple, followed the still-marked natural ridge of rock that runs up in an oblique direction towards the pyramid. The votary was conveyed in this way to the pyramid temple proper, where all the surroundings were religious, and where the vast funereal monument itself dominated the scene. The fact that the passage of approach does not lead straight up, but is on a slant, may be surprising, but the anomaly is due to the position of the natural ridge of rock which it was necessary to utilise for the causeway.

Acceptance of the theory must, of course, depend on the possibility of ascertaining that in the time of the fourth dynasty the Nile flood normally extended nearly as far as the Temple of the Sphinx, but it is welcome as supplying a unifying principle among the great monuments of the site. From the æsthetic point of view certain questions of interest emerge. The two temples—that by the Sphinx and the one up under the pyramid—present interiors the treatment of which involves new problems. In the case of the pyramid and the mastaba it is a question merely of a monument presenting itself in an exterior aspect only. The internal galleries and chambers are practically negligible. The treatment of the mass offered a problem that was by the ancient builder triumphantly solved, though a modern designer would probably have bungled it. The Egyptian had the pluck and the self-control to treat the mass as a whole on the vastest possible scale, but with a simplicity that admitted of no detail or touch of ornament. Most moderns, if even they could conceive of any scheme of such grandeur, would never keep their hand off it, but would fritter away the effect with attempts at "enrichment." In the case of the interiors of the two temples there is the same absolute austerity of treatment. The walls are lined with granite slabs of immense size—one measures 15 feet by 6 feet by 4 feet, and another is 16 feet 6 inches long—exquisitely fitted and brought to a surface of flawless accuracy. The massive squared granite beams that carry the slabs forming the roof are upborne by squared granite piers measuring about 13 feet in height by 3 feet on a side, and walls and pillars and roofing beams are all absolutely plain, like the pyramid itself, without any attempt at mouldings, detail, or ornament. When complete these pillared halls, which were paved with slabs of alabaster, must have presented an indescribably majestic appearance. They were honoured with worthy tenants in the form of statues of the monarch, one of which, in the Cairo Museum, is an ideal work of the first rank, the only extant specimen of older Oriental statuary worthy to rank with a fine work of Hellenic art.

What, we may ask, was the derivation of these pillared halls? Following analogy it has been suggested that they represent a treatment of the prehistoric dolmen form, similar to the treatment of the tumulus in the pyramid. The rude menhir becomes the regularly squared and polished pillar, the undressed slabs of the "allée couverte" are replaced by the unbroken surface of the granito walling. Professor Flinders Petrie has, however, suggested another derivation. He points to the fact that the outer casing of these primitive temples is limestone masonry of portentous thickness and megalithic character, and suggests that the real origin is the cave or rock-cut chamber, in which case the interior has been treated as if it were hewn out and not built up at all. The pillars would then represent the supports left after the excavation for sustaining the roof, and their square form would be quite natural. Such supports were left in the rock-cut tombs so abundant in every age of ancient Egypt, and seem at first to have been square, though later on the corners were chamfered off and the support ultimately assumed a polygonal form in which it came to resemble the Doric column of the Greeks. Whatever may be the truth in this matter of derivation, the thoroughly monumental character of these pillared halls admits of no question, and they take their place by the side of the other incomparable masterpieces of this early phase of the art of ancient Egypt.

REVIEWS.

THE AMERICAN INSTITUTE'S STANDARD FORM OF BUILDING CONTRACT.

The Standard Form of Agreement between Contractor and Owner and the General Conditions of the Contract, issued by the American Institute of Architects. 2nd Edition. 1915.

This document, now, by the courtesy of the American Institute of Architects, to hand, will prove of great interest to architects in this country. Whilst examination shows how thoroughly the American architects have thought out the many problems arising in building contracts common to them and to us, they, with a modesty befitting their competence, invite our criticism for mutual benefit.

The form is an amendment of that originally issued in 1887, which has been largely used for more important works, and is put forward by its authors for general use for works of small as well as large character, as "representing good practice in the States, to enable architects to draw upon it to improve their own forms." It consists practically of three parts:—(1) An Agreement of four paragraphs, or "articles"; (2) A Title-page embodying the titles of the Documents bound up with the Agreement, and an Enumeration of the Drawings; (3) the General Conditions.

There is issued with the form a standard "Form of Bond" between the contractor and his sureties on the one hand, and the building owner on the other, for due performance of the contract, and a "Form of Sub-Contract." The bond carries the liability of the sureties over the twelve months' maintenance period, and a further extension can be obtained for a small additional premium to the bonding company.

Critics of our own Institute Conditions may note that the General Conditions consist of no fewer than 43 clauses as against our 32.

Amongst many points of special interest may be mentioned the following:—

No provision is made for incorporating the quantities in the contract.

The contractor has to submit to the architect for his approval or amendment duplicate drawings of all work set out in the shops.

The drawings are stated to be the property of the architect, models the property of the client.

Practically all the architect's decisions are subject to arbitration.

Money deductions may be made by the architect for work damaged after execution, or for work not in accordance with the contract.

The maintenance period is governed by the Statute of Limitations, and varies in each State. No certificate of the architect, or proviso in the contract, can override this.

The building owner insures against fire, and is liable to the contractor for any omission or inadequacy in this respect.

Extension of time for "changes" in the work must be adjusted at the time such changes are ordered.

The contractor must, if required, submit to the architect when applying for a certificate a "schedule of values of the various parts of the work," and support it by such evidence as the architect may require.

The architect may, should occasion arise, withhold or nullify the whole, or any part, of a certificate in order to protect the client against subsequently ascertained defective work, failure of the contractor to pay the sub-contractor or his builders' merchants, valid claims the subject of liens, or if he has any doubt that the contract can be completed for the balance unpaid.

The contractor has to pay all royalties and licence fees, and defend all suits and claims whatever in respect of them.

The building owner is given power to perform any work delayed or omitted by the contractor after three days' notice, and to deduct the cost from the contractor, but subject to the architect's approval of that course and the amount deducted.

A contractor wishing to sublet may submit a list of sub-contractors to the architect, who may agree to them. The general contractor is not, however, thereby relieved from any of his liability for sub-contractors' work, nor is any contractual relation set up between the sub-contractor and the client.

The Arbitration Clause contains the provision that the arbitrator's decision upon any point shall be a condition precedent to any right of legal action.

In concluding this brief notice it is perhaps pardonable to note that our American kinsmen have not disdained to utilise their study of our time-honoured views on many points. We in turn can learn much from their admirable and conscientious labours.

E. GREENOP [F.].

RHODES.

Rhodes of the Knights. By Baron de Belabre. La. 4o. Oxford, 1908. [Clarendon Press.]

This is a stimulating if somewhat tantalising book recently acquired by the Library, and is well worthy of the attention of our members. The author was for six years French Consul at Rhodes, and was armed with an *Irada* or special permit from the Turkish Government to view everything—a very rare privilege, of which he made good use, though even so he was not able to penetrate into the interiors of private houses. He writes in English—and very good English, too, though "torse" moulding and some other terms he uses are rather puzzling—and keeps strictly to his purpose, which is to describe the buildings left by the Knights. And the subject is big enough: "Miles of fortifications stand exactly as they did when the

knight abandoned them in 1523," and there are churches, chapels, "auberges," a hospital and a palace, and many private houses.

The illustrations, besides many excellent photographs, include a reproduction in colour of a fresco of St. George from the English chapel, and sketches or copies of all the armorial bearings and inscriptions now to be seen. The Turks seem to have contented themselves for the most part with neglecting the buildings, and the author notes that even crucifixes sculptured on the walls have been left unmutated.

Beyond all this there are remains of older civilisations; close to the town is the Greek Akropolis, where Newton in the middle of last century saw abundance of sculpture and inscriptions, and there are many Byzantine remains. Here is an ideal field for the archaeologist! The island seems to be at present in the occupation of the Italians, but when the war is over and it is thrown open to visitors it is to be hoped that our countrymen will not be the last to take advantage of a unique opportunity.

CHARLES E. SAYER [A.].

THE VILLAGE CHURCH.

The Village Church. By the Rev. Peter Hampson Ditchfield. M.A., F.S.A. 80. Lond. 1915. Price 5s. net. [Methuen & Co., 36 Essex Street, W.C.]

A book like *The Village Church*, which is not for the architectural expert—who, the author rashly considers, understands all mysteries and all knowledge—disarms the critic and makes the reviewer's labour light by saving him any weighty analysis of its somewhat nebulous contents. Whatever the contents, it is always interesting to try and ascertain the purpose the author had when he undertook to write his book, although more often than not nowadays this is confined to the making of a book. Even if this has been the end in this case, it is to be regretted that more leisure has not been spent upon the work. Haste no doubt accounts for—from a theological standpoint—the humorous looseness of expression that a mediæval representation of the Last Judgment depicts realistically the torments of the wicked. It is difficult, however, to account for the suggestion that sometimes chrismatories used in our village churches were labelled according to a recommendation of St. Charles Borromeo, who was twenty years old when Elizabeth came to the throne.

The plan of the book would appear to be a collection, under various chapter headings, of otherwise unrelated but interesting details, with a little descriptive matter about various objects to be seen ostensibly in village churches. The author has not, however, necessarily confined himself to those of villages, having in addition drawn upon English cathedrals and town churches, and even gone as far as the Continent for his examples. These he has interspersed with autobiographical particulars of the books he has written and of his friendships with people who have written books, and with, in one instance, the peerage. Lack of restraint in including extraneous matter has resulted in the reduc-

tion of the descriptive matter to almost less than becoming brevity. Instead of simple lucid expositions on, for instance, tracery and vaulting, the reader is referred to some book that deals with the subject, usually by the author himself. The space devoted to the chapter on the Plan and Shape of the Church, which is exactly six pages long, might have been with advantage either used for some such exposition or itself expanded to deal more adequately with the subject. The addition of a few explanatory illustrations would have greatly assisted the general reader in understanding the development of the various features and objects to be found in a village church. The book which would have resulted might have possibly covered a well-beaten course; it would have been at least better than a collection of archæological tit-bits.

The illustrations, fifteen in number, are excellently reproduced, so that it is the greater pity that it should be stated of the Bottesford Church, which figures as the frontispiece, that it is in Lincolnshire, when it is really in Leicestershire. This confusion between the two Bottesfords has probably led also, notwithstanding the photograph, to the somewhat inexact description of the church in the text. Both illustrations and text leave the reviewer as he closes the book wondering at but hardly doubtful, in spite of the preface, of the purpose of the book.

W. J. DAVIES [A.].

TOWN PLANNING.

PRÉCIS OF MR. LANCHESTER'S MADRAS LECTURES.—II.

(Continued from page 209.)

"Civic Survey Methods" formed the subject of the second lecture. It was pointed out that before a municipality was qualified to prepare a town-planning scheme, it should be in possession of all the essential facts concerning the town as a whole, and these facts should be set forth in an easily comprehensible form. These preparatory studies are entitled "The Civic Survey," and their object is, first, to serve as a guide to the work of those in charge of municipal improvement and development; secondly, to form the nucleus of a civic museum to arouse the interest of the townspeople. A local authority which did not recognise the need of the full previous consideration implied by this Survey would simply instruct its City Engineer to draw up the town-planning scheme; and he would do it, after a fashion; but few officials have as yet had time or opportunity to follow the town-planning movement even in its literature, much less to know it at first hand from the successes and blunders of other cities. Nor do they always possess the many-sided preparation, geographic, economic, artistic, etc., which is required for this most complex of architectural problems, one implying, moreover, innumerable social ones. No single scheme of survey can be drawn up so as to be equally applicable in detail to all towns alike. Yet unity of method is necessary for clearness, indispensable for comparison; and after the careful study of schemes prepared for particular towns and cities, the Sociological Society has agreed upon a general outline applicable to all towns, and easily

elaborated and adapted in detail to the individuality of each town or city. Detailed information should be collected under the following heads:—(1) Physical Characteristics; (2) Archaeology; (3) Recreation; (4) Education; (5) Hygiene, Density and Growth of Population; (6) Industries and Commerce; (7) Traffic; (8) Valuation. These are the main headings, but the inquiry admits of adaptation and extension to the individuality and special conditions of each town and city. The information under the various headings should be as far as possible in graphic form—i.e., expressed in maps and plans, illustrated by drawings, photographs, engravings, etc., with statistical summaries, and with the necessary descriptive text.* This series, with perhaps other supplementary sections, such as one showing the distribution of the various castes and caste occupations, with pictures, prints, photographs, and historic documents, will, in conjunction with a local museum of the recognised type, form an exhibition of peculiar interest to the inhabitants of any city, and is on that account alone worth the trouble involved in its preparation.

Mr. Lanehester's third lecture was devoted to "Economics of the Civic Survey." All demands, he said, arise from the economic need. Even the governing machine that dominates the character of a capital city is a part of the national economy, and the recreative functions of the holiday watering-place can be brought under the same heading. Hence the fulfilment of any legitimate demand may be included within the range of economic effort. An attempt to classify our cities must, therefore, rest on some other ground than the distinction between an economic and a non-economic purpose, since between these no clear and permanent line can be drawn.

There have been several attempts to define the character of the city under various heads, but such classifications, whatever their historic value, are difficult to utilise at the present time, owing to the fact that the majority of our important cities fulfil varied rather than uniform functions. The best course in attempting to realise the character of the city is to summarise its history. In the most primitive state of civilisation the small community is based on the need for co-operative effort in dealing with the means of livelihood. Within this community the variation in human faculty is bound to result in a certain amount of exchange and barter; and it may easily be seen that this will be followed by trade relations between one community and another, according to the natural advantages peculiar to different localities. As a collecting and distributing agency, the town gathered raw or partially raw material, and the advantage of co-operation in converting many classes of produce to their ultimate purpose located this kind of work in the city. Thus our main interest in investigating the utility of a city will generally be its function as a mart or as a factory. Now with regard to old-established cities, their utility in these respects has, we may assume, been established by experiment. But for some definite advantages over other locations they would not exist, and though they may have been assisted or hampered by good or bad methods of management, this has only affected their positions to a minor extent.

It may be thought that the same policy of *laissez faire*

is the right one to apply to new or rapidly developing towns, lest any interference might result in arbitrarily restricting commercial activities. The only justification for this view would be the incompetence of the controlling body. The science of city planning has, however, now reached a stage that should disarm any distrust as to the possibility of forecasting on general lines the best form of development in any particular case. It need not be inferred from this statement that there will be no mistakes in detail, or that the men selected will always prove competent to their task; but it may be accepted that if the right type of body is charged with the determination of the structural lines of a new or developing city, the result arrived at will be immeasurably superior, from both the economic and social points of view, to the usual haphazard results of a *laissez-faire* policy. Since the development of the city is so largely an economic question, it follows that this is also fundamental in the case of the city survey. Now, as soon as we begin to examine the city from this point of view, we find that it is impossible to divide our work into sections cut off from each other by a hard and fast line; but as some classification is necessary to clearness, we may find it convenient to begin with the values of land and the reasons for these values, as pointing the way to some comprehension of the general economic structure.

The following may be taken as a rough schedule of the uses of town areas:—(1) Manufacturing; (2) (a) Transport (Import and Distribution); (b) Transport (Collection and Export); (c) Transport (Personal Locomotion); (3) Wages and Housing; (4) Public Accommodation; (5) Land Cultivation. Each of these demands further subdivision. Thus, in the case of (1) we have the large factory, demanding its special transport and housing schemes; the small factory and the home. In the case of (2), the various methods of transport involving traffic by rail, tramway, road or water. In that of (3), the numerous types of housing. In (4), such diverse accommodation as places of worship, educational buildings, buildings and open spaces for recreation, administrative buildings, water, lighting and sewerage. It may be asked why (5) is included at all, but certain forms of cultivation often form a factor in the life of the city, and demand to be taken account of. Now it is the purpose of the economic survey to record the productive efficiency of the city, but let me remind you that the results arrived at under this head must not be regarded as definitely valid and conclusive until they have been reviewed in the light of ethical, hygienic and other important considerations.

With this reservation we may proceed. Having gathered, tabulated and plotted all the information hinted at in the preceding rough schedule, we shall possess plans and diagrams of the city showing the purposes for which its various areas are used, their values for the uses to which they are put, the volume of traffic of all kinds passing from one point to another, the costs of transport by different methods, the definite or indefinite allocation of area to purpose, the wages earned by the inhabitants, the proportion spent on housing, the cost of the public services, and other information requisite to give a clear view of the economic conditions on which the well-being of the city rests.

Then it must also be remembered that the results arrived at are merely relative; they must be compared with those of other cities before they can be clearly appreciated.

* The lecturer gave full details of the information required in the various sections and the method of recording them. The broad general lines upon which Civic Survey work should be done are set out by Mr. Lanehester in a Paper on Civic Development Survey (JOURNAL R.I.B.A. 9th January, 1915).



9 CONDUIT STREET, LONDON, W., 6th May 1916.

CHRONICLE.

R.I.B.A. Record of Honour: Twenty-eighth List.

Killed in Action.

BAUSOR, THOMAS PAUL [*Associate*], 2nd Lieutenant, Shropshire Light Infantry. Killed in action in France on 6th April.

Second Lieutenant Thomas P. Bausor was the son of Mr. Paul Bausor, of Lark Hall, Fordham, Ely, a retired architect. He served his articles with his father, then practising in Cambridge. He was afterwards for a time architectural assistant under the Herefordshire County Council, and later architectural assistant in the Small Holdings Department of the West Riding County Council. He passed the qualifying examination and was elected Associate of the Institute in 1912. Joining the Hereford Regiment almost at the commencement of the War, he later secured a commission in the Shropshire Light Infantry. He went to France at the beginning of the present year. Mr. T. V. Steele, his immediate chief under the West Riding County Council, pays a tribute to the ability of the late officer and says: "I personally feel that I have lost an invaluable helper and friend."

His young widow writes: "My husband was attached to a trench mortar battery. I have received a letter from a brother officer who told me he had been doing fine work controlling and steadying the fire of men new to the trenches—work he did voluntarily in a dangerous spot as his own battery was not firing—and that was where he met his death. . . . His loss is a very great and real one to me, but I am proud to have been the wife of so gallant a soldier."

MACKENZIE, GILBERT MARSHALL, B.A. Cantab. [*Associate*], Captain, Seaforth Highlanders. Killed in action in Mesopotamia on 21st April. Aged twenty-five.

Captain Mackenzie was the youngest son of Dr. Marshall Mackenzie, A.R.S.A. [*F.*], and brother of Mr. Alexander G. R. Mackenzie [*F.*], the new President of the Architectural Association, who was severely wounded in the memorable charge of the London Scottish at the first battle of Ypres, and had eventually to undergo amputation of the leg. Captain Mackenzie was educated at Charterhouse and Cambridge. He was registered a Student of the Institute in 1912, and passed the Final Examination and was elected Associate in 1913. He was one of the partners in the firm of Messrs. Alexander Mackenzie & Sons, practising in the London office. He was in the Special Reserve of the Seaforth Highlanders before the War, was with the British Expeditionary Force through the retreat from Mons, and was wounded at Ypres in May 1915. He subsequently went out with the Mesopotamian Relief Force, and met his death on Good Friday in one of the last desperate engagements before the fall of Kut.

BUCKNILL, JOHN CHARLES, 2nd Lieutenant, Hampshire Regiment. Previously reported missing, now officially reported killed on 21st January.

Second Lieutenant Bucknill was the son of Lieut.-Colonel John Townsend Bucknill, R.E., of Thornfield, Bitterne, and grandson of Sir John Charles Bucknill, F.R.S. He was educated at Wellington College, and went to Emmanuel College, Cambridge, where he took his B.A., and became an architect. He had been a member of the Architectural Association since 1901. During the operations described in despatches published on 6th April the Hampshire Regiment earned distinction, especially at Nasreh, where Lieutenant Bucknill and four others were the only officers of the battalion to get through un wounded. For his services in these operations he was "mentioned in despatches."

Reported Missing.

SKIPWITH, FRANK PEYTON [*Licentiate*], Major, Royal Scots Fusiliers, was reported missing on 25th September last, and no news has been received of him since.

Major Skipwith was in practice with Messrs. J. S. Gibson [*F.*] and Walter S. R. Gordon [*Licentiate*] at No. 5 Old Bond Street, W.

Award for Special Work.

ARTHUR, J. MAURICE [*Licentiate*], Lieut.-Colonel, Royal Engineers (T.). Awarded the D.S.O. for special work in the trenches before Richeburg.

Lieut.-Colonel J. Maurice Arthur joined the British Expeditionary Force with the First Lowland Field Company in 1914, his unit being the first Territorial R.E. Field Company to join the Expeditionary Force. He was with his unit from December 1914 to November 1915, when he was appointed Lieutenant Colonel.

Serving with the Forces.

The following is the Twenty-eighth List of Members, Licentiates, and Students R.I.B.A. serving with the Forces, the total to date being 59 Fellows, 434 Associates, 233 Licentiates, and 273 Students:—

FELLOWS.

Carless, William: Artists' Rifles.
Kirkby, R. G.: 10/12 Officers' Cadet Bn.

ASSOCIATES.

Dickman, H. A.: Artists' Rifles.
Holland, P. Estcourt: Captain, Supply Officer, attached 1st Army, B.E.F., France.
Mellor, W. Law: Manchester University O.T.C.
Morley, Francis: 2nd London Sanitary Co., R.A.M.C. (T.)
Rogers, John C.: R.N.A.S.
Schooling, Stanley P.: R.N.V.R., Anti-Aircraft.
Ware, Vivian: Artists' O.T.C.

LICENTIATES.

Creighton, H. R.: Artists' Rifles.
Haslock, W. E.: Royal Engineers.
Hookway, G. J. F.: 2/1st Cambridge Regt.
Stevens, Edgar: R.A.M.C.

STUDENT.

Whitehead, Percy: 3/5 Bn. West Riding Regt.

Promotions.

Lieut. L. M. Yetts, B.A. Cantab. [*A.*], has been promoted Captain. 1/5th Queen's Royal West Surreys.
Major J. Maurice Arthur, D.S.O. [*Licentiate*], of Airdrie, has been promoted Lieut.-Colonel, Royal Engineers.

Discussion on the Annual Report [pp. 193-206].

The Annual General Meeting was duly held on Monday, the 1st May, the President, Mr. Ernest Newton, A.R.A., in the Chair. The adoption of the Report having been formally moved and seconded,

The PRESIDENT said: I very much regret to say that for the first time for many years members will not have the pleasure of listening to Mr. Woodward's able analysis and criticism of the Report. He is, unfortunately, laid up in a nursing home, and unable to be present. But, at some pains to himself, he has kindly committed to paper what he would have said if he had been present, and I will ask the Secretary to read what he has written.

The remarks of Mr. WM. WOODWARD [F.] were then read to the Meeting as follows:—

As I have, for many consecutive years past, commented upon the Institute's epitome of its doings, and as I am unable to be present in the room this year, I may perhaps be allowed to say on paper what I should next Monday have uttered vocally.

We again have to lament serious losses by death—a total of 49 normal, and of 31 in the service of the country. The Institute has lost a good friend in the person of Mr. H. L. Florence, and the Architects' Benevolent Society, especially, a generous contributor to its funds. The last time I saw Mr. Florence was when he took the chair at a Council Meeting of that Society, in the absence of our President, who has recently made such an eloquent appeal on behalf of its good work.

The architectural profession has cast everlasting honour upon itself by sending no fewer than 2,250 of its members to serve in the King's Forces, and included in that number are 983 Members, Licentiates, and Students of the Institute. With this example of glorious loyalty and devotion may I quote the beautiful couplet:

"Not once, or twice, in our fair Island story,
The Path of Duty was the Way to Glory."

I have little to say on the Reports of the Standing Committees, as they are, mostly, non-controversial. It was mooted some little time back that it would be a good plan if, at these Annual Meetings, the Chairman of each of the Committees attended to answer any question of a detailed nature on his Report. If this suggestion has not taken any real form it might be worth while for the Council to consider it. It cannot be expected that the President, or the Secretary, could answer, off-hand, any question which might be put so well as the man who had got all the details at his fingers' ends.

The Practice Committee's Report contains some useful matter. As to "Experts' services and Architects' charges in relation thereto" (p. 200), my own view is that in ordinary jobs, say £5,000 or so, the architect can do all that is necessary without the engineer. In one large job I had—where the construction demanded the employment of an expert engineer for the calculations—I told my client so, and suggested his paying the engineer's charges. I myself supplied all the general drawings and other information in my power to the engineer, and got my five per cent. on the cost of the steel work, which was included in the builder's tender, as were also the engineer's charges, as my client desired. All difficulties are overcome in questions of this sort if the client is told distinctly—beforehand—what the position is.

As to "Notes on Dilapidations" (p. 200) I do not agree that the Institute should incur any expense in any work or Handbook on Dilapidations. My own view is that all these matters of professional work should be left to be fought out by professional men as part of their "bread and butter," particularly so with regard to such argumentative matters as dilapidations, where everything turns upon

the particular covenants of the leases, nearly every one of which varies, and the arguments for and against which turn sometimes on the character and position of the premises. Let the young men fight their own battles, and don't provide them with "Handbooks," which may lead to their collapse, in Court or before an arbitrator.

I quite agree with the views expressed on "Professional Conduct, etc." (pp. 200 and 201), but, while on this topic, I should like to add, speaking generally, that it would be a bad day for the profession if an impression got abroad that, however negligent or incompetent an architect proved himself to be, however exorbitant and improper his charges, however unfair he may have been to client or builder, no respectable architect could be got to give evidence against such a one in a Court of Law.

As to "Professional Advertising" (p. 201), that matter is, I know, a very difficult one to deal with. Whole numbers, nearly, of certain "pictorial" journals are devoted to photographs and designs of architects' work; these might come under the head of "Professional Advertising," and then where would certain architects be? All that is needed is the exercise of a little common sense, and that is, I am sure, possessed by our President and Council.

With regard to "Personal Matters" (p. 201) I cannot help reading the paragraph thus (if I may be permitted my little joke): "that the matters referred to are of such a personal nature as to render them unfit for publication."

The Report of the Science Committee contains some very useful matter, and the subject of "Dry Rot in Timber" is one of great importance to the profession. I hope the Committee will very shortly be able to present a practical treatise on this really useful subject, about which there are at present such diverse opinions.

The Report of the Honorary Auditors for 1915 is drawn up—if I may say so—in the right way: short, and to the point. I would, however, have brought into it the important and praiseworthy item (on p. 196) under the head of "Finance," viz., "The subscriptions of all Members and Licentiates serving with the Forces are also remitted. In 1915 this measure cost the Institute some £700, and in 1916 it will probably cost well over £900." This makes the fact that in 1915 there was a surplus of £719 13s. 2d. still more satisfactory.

I see that, as compared with 1913, there has been a saving of £598 on the cost of the JOURNAL. I hope, however, that the usefulness of our JOURNAL will not be too much curtailed, because we must remember that to many of our provincial brethren, and members abroad, it is the only medium of knowing the work the Institute is doing and of up-to-date professional information.

I am very sorry to see that in 1915 the subscriptions in arrear amounted to the large sum of £1,169. This is due, no doubt, to the sad condition of many architects in consequence of the War. Notwithstanding all the efforts of our President, very little assistance to architects has been obtained from the Government, nor, from what I personally think of it, is there likely to be. If the Government had employed architects, in the usual way, in connection with war buildings, I am sure that the nation would have been saved many hundreds of thousands of pounds sterling.

I see that (p. 203) the revenue from letting our Galleries has been reduced from £454 4s. 8d. in 1914 to £85 5s. in 1915, and this because they have been handed over, free of rent, for the purpose of the "Civic Survey." I am sorry to say I know nothing of this Survey, and therefore how, or in what way, it can be of any service to the Insti-

tute, whose funds have been thus depleted. Perhaps I may be informed a little further on this item.*

I am glad to see a note of appreciation for our staff from the Honorary Auditors. I heartily join in this note, as I am sure that, from Mr. MacAlister down to the junior clerk, the best interests of the Institute have been, and will be, well looked after. And, as a last word, may I express the fervent hope that when, next year, the Annual Report is presented it will be with the world at peace, and with the happy return from the Front of those dear fellows who are at this moment in the thick of the strife upholding the honour and welfare of the British nation.

The President having invited discussion on the Report, Mr. SYDNEY PERKS, F.S.A. [F.], said: We are very glad to hear Mr. Woodward's views. He mentioned the question of the handbook on Dilapidations, and said he hoped it would not be published. But I hope it will, and for two reasons. The first is that it pays us, for we make a good profit out of the sale; and the second is, it has been of great use in preventing litigation. When it was first drawn up, in the year 1843, it was in the form of a pamphlet, and the names of those responsible for its compilation were recorded. A new publication having become desirable in order that changes in practice since 1843 might be recognised, the work was revised and extended, and issued in book form in 1903. It was then put forward as the views of the profession on the subject of Dilapidations, and no names were attached to it. Consequently the work is of great weight in settling disputes, for it represents the practice of the profession of architects and surveyors, and not the views of certain men. The work is looked upon as a text-book issued by a great authority, the R.I.B.A., and it has been the means of saving much costly litigation.

Arising out of the Report of the Practice Standing Committee, I should like to call attention to that most complicated subject, professional etiquette, or the ethics of the profession. It seems to me that the Council, before 1914, very rightly had a perfectly free hand, under Bye-law 24, to deal with any defaulter by reprimand, suspension or expulsion. The matter was left entirely in their hands; they had power to do exactly what they thought fit, and I am sure that it is the general wish of Members that the Council should have that power. The Bye-Law is as follows:—

Any Member or Licentiate contravening the Declaration A, B, C, or D, as the case may be, signed by him, or conducting himself in a manner which in the opinion of the Council is derogatory to his professional character, or who shall engage in any occupation which in the opinion of the Council is inconsistent with the profession of an architect, shall be liable to reprimand, suspension, or expulsion in manner hereinafter provided. Any member or Licentiate who may be convicted of felony shall, *ipso facto*, cease to be a Member or Licentiate of the Royal Institute.

But in the KALENDAR, on page 70, is now printed a list of Resolutions of the Council calling attention to certain matters which are deemed to be breaches of professional etiquette. One of the Resolutions has reference to Members taking part in a prohibited competition, as bringing them under Bye-law 24. Another says that public advertising by an architect is a contravention of Bye-law 24. But for the other seven offences there is apparently no penalty at all. The faults I have just referred to may be great, but to my mind they are trivial compared with No. 4: "That no Member shall attempt to supplant another architect after definite steps have been taken

towards his employment," but in this case there is no penalty mentioned. These chatty little paragraphs may be useful for us, but we must remember that, without any notice, they may be exposed in a Court of Law, and we may have the critical eyes of a King's Counsel turned upon them. I have been concerned in a very important case recently—a case which ran into six days—which largely turned on professional etiquette. I gave the strongest evidence I could that there had been a breach of professional etiquette. I was asked what the etiquette was, and I stated my views, and my case would have been helped very much if that breach had been enumerated or set out in our KALENDAR, but it is not. I mention this as an example in support of my argument, that this list ought either to be done away with altogether or else very considerably enlarged. It seems to me it would be much better to leave the Council with the enormous power which they have under Bye-law 24, and under the form of Declaration signed by every Member and Licentiate. The Council would be in a much stronger position if the list I refer to were omitted.

To take another example. I see in the current issue of the JOURNAL that it is proposed to add to the nine commandments—making the orthodox ten—this: "That the payment by any Member or Licentiate of the R.I.B.A. of a fee or commission to any person in respect of his good offices in introducing work is unprofessional, and on all grounds to be avoided." But if we turn to the Declaration of every Member or Licentiate, we see that he promises and agrees that he will not accept or give any improper commission. So I think that if the proposed paragraph were added to the other nine, it would tend to cut away the ground from under the feet of the Council by practically admitting that there is a certain sort of commission paid now which may be regarded as justifiable. The prohibition is very mildly worded: it does not say that this payment is contrary to the declaration of the architect: it does not say that this payment will make the man liable to dismissal under Bye-law 24. I do not know why it is put in, but it seems to me a dangerous thing to do, because it practically admits that a certain sort of commission *might* be paid. It seems to do so because we have this very strong prohibition in the Declaration. If there were a case in the Courts about a commission, and the Secretary, or the President, were to give evidence as to what has been done, he would find himself in a very awkward position, because counsel would want to know what instances there are of men having been reported to the Council and not dismissed for infringing this or that regulation. Reading between the lines, it seems to suggest that payment is constantly being made for introducing business, and that our Council do not think it is a grave offence; if they did, they would dismiss the man under his Declaration. The suggested paragraph would not strengthen the power of the Council, it would only weaken it. I am much interested in this question of professional etiquette and ethics. I had the honour of sitting on the Council some year or two ago and I drew up an addition to these Rules. But it was pointed out to me by a brother member, "Don't you think you are defeating the object you have in view by laying down any Rules?" If you have these Rules, nine or ten of them perhaps, and you report a man to the Council for a breach not in the list, you would be met with the argument, "But you yourselves have drawn up a list of matters which constitute a breach, and you do not mention this among them; ergo, it is not a breach of professional etiquette." You must either make this list very much

* The Council decided to discontinue letting the galleries before the beginning of the war, as they were required for the Examinations and the other work of the Board of Architectural Education. The drop in the revenue under this head is therefore not due to the use of the galleries by the Civic Survey of Greater London.—SECRETARY R.I.B.A.

larger, and word it much more carefully, and refer to any penalties, or the list should be omitted altogether. I have no very strong view as to which is the better course, but after careful consideration I would like to propose the following resolution: "That the Practice Standing Committee be requested. . . ."

The PRESIDENT pointed out that the present was not the occasion for bringing forward a motion of this kind. Notice must be given, and the matter be brought forward at a subsequent meeting, so that members interested may attend and record their votes on the question. Meanwhile any notes on the matter that Mr. Perks liked to hand in would be brought before the Committees who had to deal with these matters. The President went on to say that Mr. Perks' remarks would be reported in the JOURNAL, and the effect would be as valuable as moving a resolution.

Mr. PERKS observed that he would like the matter considered; he had brought it forward entirely in the interests of the profession.

Mr. H. HARDWICKE LANGSTON [A.] asked the meaning of the phrase at the top of page 201: "It becomes the duty of members, when giving advice relating thereto, not to weaken the value of the Scale." He also asked whether the Scale referred to was the one published in the KALENDAR, or that which was discussed a year or two ago making very radical alterations in the charges?

The SECRETARY: It is the Scale published in the KALENDAR; the other was a confidential draft, which has never been published.

Mr. W. HENRY WHITE [F.], replying to Mr. Langston's first question, said: I think Mr. Langston might be left to his own judgment on that question. If he studies the law cases in which the fee question has cropped up he will find that evidence has frequently been given which is not in accordance with the Scale of Charges published by the Institute. That is what we wish to avoid. Wherever it is possible, we want that Scale referred to in Court as the recognised Scale of the profession.

Mr. LANGSTON: That does not answer my question. What I want to know is what is meant by "weakening the value of the Scale."

Mr. W. GILLBEE SCOTT [F.]: As a member of the Practice Standing Committee, the interpretation I put upon it is this: Not infrequently in law cases an architect is suing for his fees. He is working for, and asks for 5 per cent., and some other architect, a member of the Institute, will appear on the other side and say that in his judgment 2½ per cent. is enough for the work done, utterly regardless of the fact that he is in conflict with the Schedule of Charges. We think that for any member of the Institute to get up in Court and say—in effect, if not in words—"In my judgment this Scale is wrong, and the charge should only be so much," mentioning a lower figure, is a very scandalous thing to do.

Mr. LANGSTON: Thank you; that quite answers my question.

Mr. C. H. BRODIE [F.]: I would like to speak on the question of the Book on Dilapidations. I was, unfortunately, Secretary of the Committee when that book was produced, and I am shocked that my dear friend Woodward should want to throw over my work, and that of so many members of the Committee, in the jaunty way he has adopted in his remarks, which we are so pleased to hear. And I became more surprised at his later remarks, because he ventured to pat on the back the Report being published on the subject of Dry Rot. Why he should let a young member of the Institute flounder into a

terrific case involving, perhaps, very serious costs against his client on the subject of dilapidations, and why he should want to publish a book to protect a young architect who might be called upon to spend ten pounds in ripping up a few joists, I do not know. I think I ought to put it on record that Mr. Woodward, for once, is most illogical, because he objects to one book, and wants another which, in my opinion, is not a quarter the value. I quite agree with the remarks by Mr. Perks about what should and what should not be published in the KALENDAR on the question of professional etiquette: but I go further than he does, and I say that, in my humble opinion, it is a mistake to put any definite offences in the KALENDAR. I am not saying that in a paper like the Annual Report, or in the JOURNAL, the Council should not say that, having considered the question, it is unprofessional to do a certain thing: but to put that in a book which is kept for reference, like the KALENDAR, is, I think, a great mistake. It should be left to the authoritative power of the Council, and the Declaration, which, as Mr. Perks points out, is exceedingly clear. It is a mistake to specify any cases of what we consider unprofessional conduct. I go further than Mr. Perks when he says he has not made up his mind whether these should be lengthened or cut out altogether, for in my opinion they should be cut out absolutely.

The Report was then put to the meeting and carried unanimously.

Privy Council's Sanction to Suspension of By-laws.

AT THE COUNCIL CHAMBER, WHITEHALL.

The 10th day of April, 1916.

By the Lords of His Majesty's Most Honourable Privy Council.

WHEREAS by the Charter of the Royal Institute of British Architects, dated the 28th March, 1887, it is provided that the Royal Institute may from time to time by Resolution of a General Meeting confirmed at a subsequent General Meeting, which shall be held not less than 7 and not more than 28 days after the former Meeting, make and adopt such Bye-laws as may be deemed expedient, and may in the same manner vary, suspend, and rescind any Bye-laws. Provided always that no such Bye-laws shall be of any force or validity whatever unless and until they have been approved by the Lords of His Majesty's Most Honourable Privy Council:

AND WHEREAS the Royal Institute did, by Resolution of a General Meeting held on the 13th March, 1916, confirmed at a General Meeting held on the 27th March, 1916, suspend Bye-laws Nos. 27 to 35 (inclusive), 46, and 50 to 54 (inclusive), so far as the said Bye-laws govern the Annual Election of the Council, the Standing Committees, and the Honorary Auditors, so that the Council, the Standing Committees, and Honorary Auditors, elected in the year 1915 should remain in office till the 30th June, 1917:

AND WHEREAS the Royal Institute has submitted the said Resolution to the Lords of the Council for approval:

NOW, THEREFORE, Their Lordships, having taken the said Resolution into consideration, are hereby pleased to approve the same.

ALMERIC FITZROY.

The Safety of St. Paul's.

Lecturing recently on "St. Paul's Cathedral: Its History and Preservation," Canon Alexander, speaking of the danger from fire, said that during the last three or four years inflammable material had been removed and hydrants carried right up to the Dome of the Cathedral. With the help of an electric pump, water could be got up to any part of the building and right over the Cross. For the first time in the history of St. Paul's they were now in a position to deal adequately with an outbreak of fire. Referring to the work of making the building structurally safe, Canon Alexander said that about half the sum of £70,000 which had been appealed for to enable this to be done was still wanted. The money was not being spent at all on the foundations—a problem which could only be taken in hand after the fabric had been strengthened. If they completed in the next few weeks work now going on at the south-west angle, they would have got over one of the most dangerous parts of the undertaking. He was afraid that before the work was finished it would be necessary partly to shore up the south transept to take off the weight from the top of the pier where it was much broken.

Official Architecture.

The Annual Report of the Manchester Society of Architects states that a deputation from the Society has met the Committee of the Manchester City Council which was appointed some time ago to inquire into the whole matter of official architecture. The following is a summary of the views laid before the Committee:

The Manchester Society of Architects is affiliated with and represents the Royal Institute of British Architects in the Manchester district, which extends from Crewe to Carlisle, and is particularly representative of the Architects practising in Manchester and the adjoining towns. This deputation has been appointed to wait upon you with a view of asking the favourable consideration of the City Council to the desirability of their utilising, to the best advantage of the Community, the services of the practising Architects in the future development of the City. For many years the Royal Institute, the Architectural Societies all over England, and the modern and most progressive Universities (as Victoria University) and other Educational Authorities have been using great and successful endeavours to further the special education of Architects. Examinations have been held and Degrees conferred by Royal Charter. The members of the Manchester City Council have appreciated these endeavours by supporting the Manchester School of Architecture and so helped to give opportunity for the higher education of the Architects who were and are being trained in their midst. Some of the Manchester men, in the wider fields, have shown the success of the Manchester School teaching, and we rejoice that they have been able to get the educational advantages here instead of, as in former days, having to leave this District for the necessary special training. But; however learned and skilful the Architects may be, and however much they may have profited by the training (of which part has been provided at the public expense), their accomplishments are useless without opportunity of using them.

The development of Municipal life makes it that an increasing amount of building will be required when the times again become normal: Public buildings should be the expression of the best Architecture of the time, and in the organisation which will surely come at the conclusion of the war, we urge, in the

highest interests of the community, that opportunity should be given by the Council for the best architectural services to be available. This can only be done by giving opportunities to practising Architects of developing the best possible designs, both as regards plan and elevation, and of these being adopted. We ask that such arrangements may be made as will provide for it so as to bring a variety of independent trained thought to bear on all new Public building problems.

Architects in successful practice are ever desirous, and the exigencies of private practice require, that in all the buildings they design there should be a maximum of accommodation with the highest efficiency at a minimum of cost. With them it is essential to watch closely new developments in planning, the use of materials and new forms of construction, in a manner almost impossible where purely administrative work must occupy the thoughts and mind when official duties have the most prominent place.

With regard to the costs in the carrying out of the work it is difficult to give comparative results, but in Education Authorities' buildings effective comparison can be made. The Hon. Secretary of the Manchester Society of Architects has been making investigations in regard to the cost of schools in Manchester and District, and reports as follows: "The costs of the Elementary Schools built by the Manchester Education Committee during the last 20 years (taking the 25 principal schools erected) is an average of £14 7s. per child. Taking the 9 earlier schools where independent Architects were employed the cost was only £11 8s. 3d. per child; but when the Architect was dispensed with and the Committee had the drawings prepared in their own office, the average cost per child rises to £16 in the later 16 schools built."

No doubt, this increase is partly accounted for by the additional requirements of the Board of Education and by the increased cost of building; but, from a list of 25 modern schools built in the surrounding towns and under similar conditions by independent Architects, the average cost is £13 18s. 9d. per head, although this list contains several one-storey schools, which would be expected to be more expensive per head than the two or more storey buildings erected by the Manchester Education Committee. The published accounts of the Committee also show that full fees chargeable by Architects are added to the cost of each School building for drawing office and superintendence, though no responsible architect is employed."

It certainly appears from this statement that while not getting the advantage of the architectural services of the most highly trained men in the community, the cost is above the average of buildings erected under similar conditions; and, in addition to this increased cost, there is no saving in the matter of architect's charges.

Some of your committees, as the Tramways Committee, do take advantage of the services of an independent architect.

In asking your favourable consideration to the desirability and advantage of practising architects being engaged on the erection of all public buildings, we wish to state that nothing of a personal nature is intended or thought of in our statement either as regards the members of the committee or their officials. The matter is one of principle. The City Architect, in his dealings with practising architects, has shown himself to be helpful and considerate in the performance of his manifold and important official duties, which are likely to become even more onerous than at present. In an advisory and consultative capacity his services have been of much value, and we place on record our appreciation of them.

We urge again that as the architecture of all public buildings should be really representative of the highest and best thought of our time, it is necessary that the services of the most skilful and highly trained minds should be utilised for it. This can only be done by giving practising architects opportunity in connection with all public buildings, and by their services being made available in the future development of this great city.

The Committee of the Corporation received the deputation very sympathetically and promised their careful consideration of the points at issue.

Home Problems after the War.

From the National Housing and Town Planning Council has been received a copy of the Resolutions passed at the National Congress on "Home Problems after the War," held last month at Caxton Hall.

Resolutions relating to the preparation of Housing and other Schemes—these Schemes to be put in operation at the close of the War, so that the danger of serious unemployment in the building trade may be averted.

1. "That this Congress urgently directs the attention of the Government to the critical need for the provision of additional housing for the working classes, and in respect of the national interest and responsibility in the matter urges upon the Government to set aside no less than £20,000,000 to make such advances to Local Authorities and other Agencies as will enable them to provide houses at reasonable rentals having regard to all necessary and equitable circumstances and additions."—Moved by Councillor Owen Coyle (Lanarkshire County Council), seconded by Mr. Whybrew (Workmen's National Housing Council), and carried.

2. "That this Congress, recognising the need for having ready building and other schemes to afford employment at the end of the war, and also the great need for the further provision of houses for the working classes, which can only be met by municipal enterprise, where other agencies fail, and recognising further the advantages of building such houses in connection with Town Planning schemes, urges upon all Local Authorities throughout the country the supreme importance of preparing housing schemes at once where there is a lack of suitable accommodation and of taking the necessary steps to promote and press forward Town Planning schemes in their areas."—Moved by Councillor Harrison Barrow (Birmingham City Council), seconded by Mr. J. A. Simpson (Clerk to the Woodford Urban District Council), and carried unanimously.

Resolutions relating to the building industry.

1. "That this Congress is of opinion that the legislation promised by His Majesty's Government in 1913 and again in 1914, with regard to the amendment of the Finance Act of 1909, should be now carried out in order that an admitted obstacle to the building of working class houses may be removed and the provision of such houses stimulated at the close of the war."—Moved by Mr. A. W. Shelton (Nottingham), seconded by Councillor S. Smethurst (National Federation of Building Trades Employers), and carried.

2. "That this Congress desires to urge upon the Government the need for legislation to secure uniformity in the principle of the rating of owners of house property and particularly the removal of the existing limits to compounding for rates."—Moved by Councillor T. R. Marr (Manchester), seconded by Mr. T. Alwyn Lloyd (Welsh Town Planning and Housing Trust), and carried.

3. "That in the opinion of this Congress legislation is necessary to simplify and cheapen the transfer of land so as to encourage the building of houses for the working classes."—Moved by Alderman A. Bennett (Warrington), seconded by Councillor Pemberton (Warrington), and carried.

Resolutions relating to General Housing Action after the War.

1. "That in view of the results produced by the systems of providing houses for the working classes hitherto prevailing, this Congress requests the Government to take such steps on either local or national lines as will facilitate and stimulate the activities of Local Authorities and other agencies in the erection of houses that are necessary."—Moved by Councillor Myers (Dewsbury), seconded by Mr. Cheverton Brown (National Property Owners' and Ratepayers' Federation), and carried.

2. "That, in the opinion of this Congress, housing schemes promoted by public authorities, save in the case of schemes intended for housing those unable meanwhile to pay an economic rent, should be economically self-supporting."—Moved by Councillor Pearce (Leicester), seconded by Mr. Me-

Kellan (Manchester House Builders' Association), and carried by a large majority.

Resolution relating to the Housing of the Poor.

"This Congress urges all parties in the State to take combined action to secure that every family shall be housed under proper conditions; and in order to secure this end, which is of vital and national importance, urges that legislation should be introduced—

(a) to set up machinery in all industries to require employers to pay wages sufficient to ensure decent housing accommodation for the workers in these industries; and—

(b) to secure that where such raising of wages can only be achieved by stages the Local Authority shall recognise and fulfil the duty of providing decent housing accommodation for those unable meanwhile to pay an economic rent, and that the whole country shall bear the difference in the cost between the rent of the decent dwelling and the rent which the tenants can afford to pay."—Moved by the Secretary to the Congress, seconded by Mr. B. S. Rowntree, and carried unanimously.

Appointment of Deputation to the Government.

It was decided that the decisions of the Congress should be submitted to the Government by means of a special Deputation, and the following Resolution was unanimously adopted:

"That this Congress, representative of persons, authorities, and organisations interested in Housing, requests the Government to receive a Deputation which shall submit to them the decisions of the Congress: and that the National Housing and Town Planning Council be requested to make the necessary arrangements."

The Council appointed the President, Mr. Ernest Newton, A.R.A., and Sir Aston Webb, K.C.V.O., C.B., R.A. [P.], to act as representatives of the Royal Institute at the Congress.

Ruined Ypres.

Staff Captain D. Hill (Newcastle-upon-Tyne), a member of the Northern Architectural Association, who was recently awarded the Military Cross, writes:

"I am at present quartered within a half mile of Ypres, and, having visited it during my apprenticeship and sketched in the Cloth Hall, I appreciate to the full the Huns' 'Kultur.' The old wooden house near the Lille Gate is still recognisable, but it can never be the dream to architects that it once was. The Cloth Hall itself is levelled to the ground, except for the wall where the frescoes were and a small portion of the tower which still raises a battered pinnacle to heaven. St. Martin's Cathedral is shattered, and the other day I had a clamber over the ruins, and admired the splendid strength of the masonry. The ramparts still stand and throw off the Germans' shells like hail upon a stone floor, but the beauties of the place are killed; yet on a moonlight night its picturesque qualities attract, though in a gruesome light."

Civic Arts Association: War Memorial Competitions.

The Civic Arts Association is arranging a series of competitions and exhibitions, to bring before the public a variety of suggestions for War Memorials. The first Exhibition, to be held in the Common Room of the R.I.B.A. in July next, will be devoted to the designs and models submitted in the competitions of which particulars are given below. Large sums of money are likely to be expended on memorials, both monumental and of a kind suitable for the homes of

the people, and the Civic Arts Association hopes to be able to bring those who contemplate the erection of memorials into touch with artists and craftsmen. The war has weighed heavily on the latter, and the call for memorials will afford a reasonable demand for their services. Prizes amounting to £205 have been offered by generous donors for certain types of memorials; also £25 has been placed at the disposal of the Jury for award to designs, other than those gaining 1st and 2nd prizes, which show special merit in any class. The classes for the competitions are as follows:—

- I. Monument for the new County Hall, London: 1st Prize, £50; 2nd Prize, £15.
- II. Wall Tablet in Cast or Chased Bronze: 1st Prize, £20; 2nd Prize, £5.
- III. Wall Tablet in Carved Wood: 1st Prize, £20; 2nd Prize, £5.
- IV. Wall Tablet in Stone or Marble: 1st Prize, £20; 2nd Prize, £5.
- V. A Simple Wall Tablet in Wood: 1st Prize, £10; 2nd Prize, £5.
- VI. Mural Painting for a Boys' Club: 1st Prize, £10; 2nd Prize, £5.
- VII. A Fountain: 1st Prize, £20; 2nd Prize, £5.
- VIII. Inexpensive Memorials for "The Home": 1st Prize, £5; 2nd Prize, £3; 3rd Prize, £2.

The conditions governing the competitions and other necessary details will be sent to intending competitors who forward to the Secretary of the Association at 28 Prince's Gardens, S.W., a postal order for 1s. and a stamped and addressed foolscap envelope. The postal order will be returned on receipt of a *bona fide* design.

British Institution Scholarships.

These scholarships are of the value of £50, tenable for two years, and are paid quarterly. This year one Scholarship is offered in Painting, one in Sculpture, one in Architecture, and one in Engraving. The examination will take place in November. Candidates must be not more than 25 years of age on the 1st November 1916. The Scholarship in Architecture is open to all art students who have obtained a Gold Medal, or a scholarship or money prize of the minimum value of £5 in any art school in the United Kingdom. Candidates must submit for examination: (1) A measured drawing of a portion of an existing building, on a half imperial sheet of paper. (2) A freehand shaded drawing of a capital, on a half imperial sheet of paper. (3) A design for a Triumphal Gateway, or arched entrance to a public park or courtyard—frontage 70 feet approx.—to be executed in stone or brick; sculpture not necessary. Drawings to consist of a ground plan, two elevations, and a cross section, all to a scale of 8 feet to the inch; also a perspective view, the nearest angle of the building being to the same scale. Competition drawings must be delivered at the Royal Academy, Burlington Gardens entrance, on 25th October. Copies of the conditions may be had at the office of the Trustees, 19 York Buildings, Adelphi, W.C.

Books Received.

The Chancel of English Churches. By Francis Bond, M.A. With 220 Illustrations. 8s. 1916. 7s 6d. net. [Humphrey Milford, Oxford University Press.]
The Architects' and Builders' Pocket Book. By the late Frank E. Kidder, C.E., Ph.D. Compiled by a Staff of Specialists. Thomas Nolan, Fellow of the American Institute of Architects, Editor-in-Chief. 16th ed., rewritten. 8s. 1916. Price 21s. net. [Chapman & Hall Ltd., London.]

MINUTES.

At the Eighty-second Annual General Meeting, held Monday, 1st May 1916, at 4.30 p.m.—Present: Mr. Ernest Newton, A.R.A., President, in the Chair; 14 Fellows (including 8 members of the Council) and 10 Associates (including 2 members of the Council)—the Minutes of the meeting held 27th March having been published in the JOURNAL were taken as read and signed as correct.

The Hon. Secretary having announced that 2nd Lieutenant Thomas Paul Bonsor, of the Shropshire Light Infantry, Associate, elected 1912, had been killed in action in France on the 6th April, it was resolved that the Institute do record its deep regret at the loss of the gallant officer, and that a message of sympathy and condolence be addressed to his near relatives.

The President formally moved the adoption of the Annual Report of the Council for the official year 1915-16.

Mr. H. P. Burke Downing [F.] seconded the motion.

The President announced that Mr. Wm. Woodward [F.] was unable to be present owing to indisposition, but that he had committed to writing and sent to the Institute some remarks he would have made had he been present, and on the direction of the President these were read to the meeting.

In the discussion which ensued the following members took part:—Mr. Sydney Perks, F.S.A. [F.], Mr. H. Hardwicke Langston [A.], Mr. W. Henry White [F.], Mr. W. Gillies Scott [F.], and Mr. C. H. Brodie [F.].

The Report was then put to the meeting and carried unanimously.

On the motion of the President a cordial vote of thanks was passed to Messrs. R. Stephen Ayling [F.] and A. W. Sheppard [A.] for their labours in connection with the audit.

The proceedings closed and the meeting separated at 5 p.m.

NOTICES.

A GENERAL MEETING (ORDINARY) will be held Monday, 15th May 1916, at 4.15 p.m. precisely, for the following purposes:—

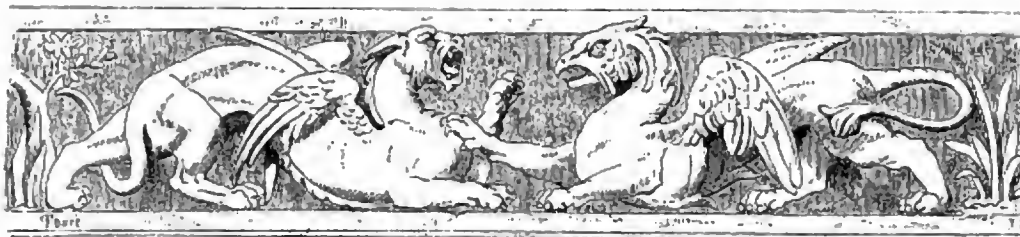
To read the Minutes of the Annual General Meeting held 1st May 1916; to announce the names of candidates nominated for election; formally to admit members attending for the first time since their election.

On View in the Common Room.

A Collection of Drawings of Old Work and Sketches and Designs by the late CHARLES EDWARD MALLOWS, F.R.I.B.A. Kindly lent by his widow.

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THE FUTURE OF THE POST OFFICE SITE.

By H. HEATHCOTE STATHAM [F.].

AS long as it was supposed to be the intention to erect additional buildings for the General Post Office business on the site of the old and now demolished Post Office, there could be only one rational method of treating the problem, whether from the point of view of architectural effect or of practical convenience—viz., to place the new building closer up to the existing one and to constitute the space between them a Post Office Yard; to cancel the road called St. Martin's-le-Grand, and to take the main traffic route to the east of the new building. To allow a main traffic route to interpose between two buildings erected for one purpose and forming parts of one great business institution, when it would be so easy to arrange it otherwise, seemed to me to be little short of insanity. This view I urged strongly in a letter to the *Times* three years ago, accompanied by a small plan to illustrate the scheme recommended.

Since then it is confidently reported that the Government have abandoned the idea of erecting a new Post Office on the site of the old one, and intend to decentralise the Post Office. My own impression is that, in that case, they are making a mistake, and that to make one great group of the Post Offices, on the method referred to above, would give the best result, both in an architectural and practical sense. If, however, we are to understand that the idea of a new Post Office building on that site is abandoned, the problem takes on an entirely new aspect. There is a large cleared space, on which buildings of some kind will be eventually erected. Are they to be planned so as to give the best architectural result and at the same time afford the opportunity for a great public improvement in a crowded centre of the City; or is the ground, according to the usual lamentable practice in London, to be covered with buildings as close as they can be packed, with no consideration but for the rental area to be derived from them?

A single glance at the plan of the site as existing shows what a wretchedly inadequate provision, both in regard to shape and area, is at present afforded by the triangular space between Newgate Street and Cheapside, to form the meeting-ground for three principal traffic routes. But we have to consider also what further demands are likely to be made upon it. It is of great importance that there should eventually be a new and more direct road from this quasi-central point to Liverpool Street Station; and, as Mr. Arthur Crow (I think) first pointed out, unless provision is made for this now, the ultimate result will be that we shall be told that there is no way of making such a street except by destroying Wren's church of St. Vedast. Again, if the proposed St. Paul's Bridge is ever built (as to which I have my doubts), there will have to be a new and wide street past the east end of St. Paul's to take the northward traffic from that problematical bridge. It is evident, therefore, that, if only to prevent the congestion of traffic, there will have to be a considerably larger open space here than at present exists. But here is the opportunity and the excuse for doing something more than merely providing adequate space for traffic—for making an important architectural improvement and adding a new feature to this part of London.

Referring now to the proposed plan for the treatment of the site, it may be first observed that assuming that our information is correct that no Post Office building is to be erected on the cleared

site, in that case there is no reason why St. Martin's-le-Grand should not continue to be the main thoroughfare northwards, only that it should be made a 90-foot street instead of a 70-foot one. Every opportunity should be taken of introducing wider streets, within reasonable limits. Newgate Street (50 feet) and Cheapside (60 feet), supposed to be adequate when they were first laid out, are both in the present day obviously too small for their traffic. Secondly, the south front of the new building should come into line with the Newgate Street angle of the Post Office building. It is contrary to all good principles in architectural street-planning that a building should be projected part way across the line of a street leading up to it, so that what is seen along the vista of the street is neither an open space nor the architectural centre of a building, but merely an angle of a building of which the remainder retires out of sight. In this plan the southern block of the new building carries on the line between Newgate Street on the west and the proposed new street on the east, which reflects, as it were, the angle of Newgate Street. The northern block of the new building is planned so as to emphasise the importance of Goldsmiths' Hall, the eastern façade of the building being of the same length as the Hall and parallel with it, and its central entrance is axial with the centre of the Hall. At the north-west angle of the new building one of the projecting pavilions is placed so as to form a terminating architectural feature along the axis of the street immediately north of the Post Office. The central area in this building is supposed to be only for light to communication corridors which would run round it; for this purpose it is ample; for light and air for offices in occupation it would be insufficient. The 20-foot top-lighted arcade between the north and south blocks of the new building would be very valuable for ground-floor shops, for which a high rental could probably be obtained; above that level the two buildings would stand separate.

The proposed new 80-foot street leading to Liverpool Street Station entirely clears the church of St. Vedast, which may thus be considered to be preserved for ever, or, at least, for as long as it will last; and a small triangular space north of the church, between it and the street line, could be planted or laid out as a small garden. Similarly, the space left between Goldsmiths' Hall and the new street could be made a small semicircular garden, a treatment which would have the advantage of bringing Goldsmiths' Hall more into view than it is at present; and any opportunity of introducing a little foliage or a bit of garden into a city, in some small space which cannot be well utilised for building, should always be made the best of. The Peel statue, which in the existing plan is obviously very much in the way, in the new plan is shown placed against the balustrade of the small semi-circular garden, in a position in which it cannot be in any one's way.

The buildings which in the existing plan project in front of the boundary of St. Paul's Churchyard, are shown as set back and rebuilt, thereby opening up St. Paul's a little more and making a more dignified west side to the proposed new Place.

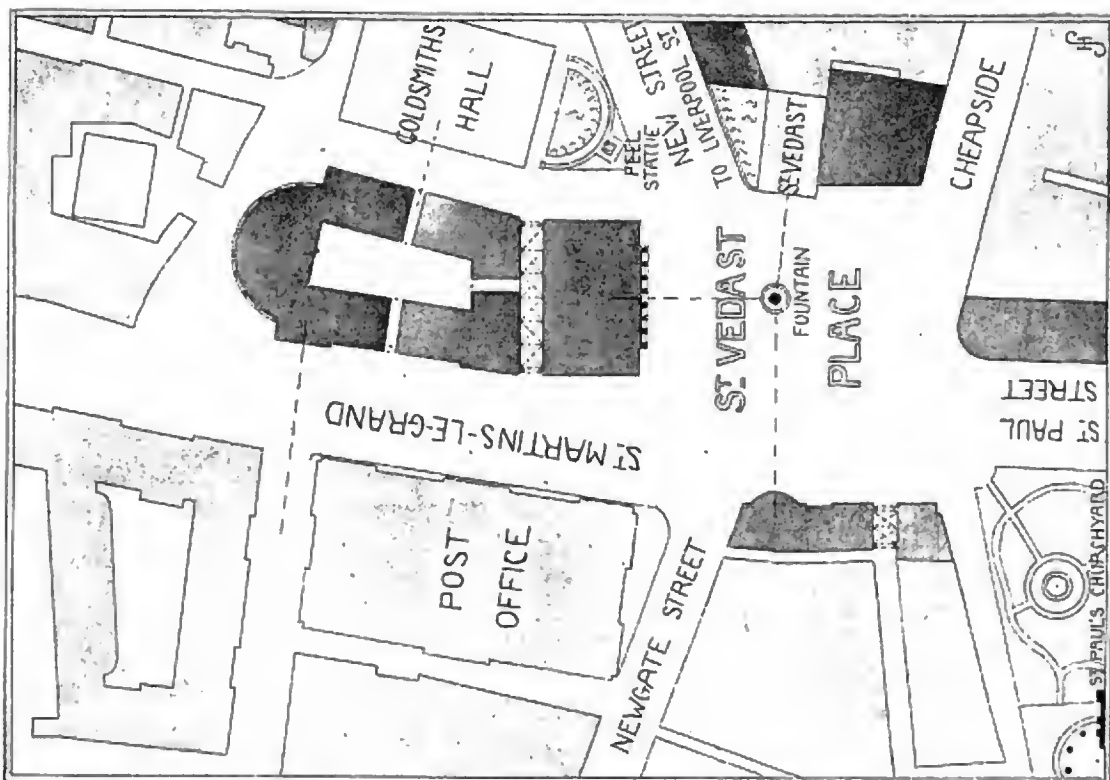
Whether the St. Paul's Bridge be ever carried out or not, a wider street to the east of the Cathedral, called here "St. Paul Street," would be very desirable, both for traffic and for giving increased dignity and space to the confines of the Cathedral, now much too closely hemmed in at the east end, and it would form an opportunity for getting rid of the commonplace row of business premises which have been erected to the east of the Cathedral, and which are quite unworthy of such a position.

A fountain or a monument (perhaps in the nature of a war memorial) might be erected in what we will call "St. Vedast Place," not, however, in the exact centre of the open space, but in such a position as to be axial with the centre line of the new building and with the centre line of St. Vedast Church, and thus have an architectural relation with its surroundings.

People who look upon all buildings in a city merely as rent-producing property will, of course, exclaim against such a plan as this, as involving a sinful waste of profitable building land; to which one can only reply that there are other values in a city besides those that can be stated in ground-rents, and of rather a higher nature; and until we can get that into the heads of corporations and corporate bodies there is little chance of any important improvement in the street architecture and street-



PRESENT STATE OF THE POST OFFICE SITE.



PROPOSED TREATMENT OF THE SITE. By H. H. STATHAM, F.R.I.B.A.

planning of London. In this instance there is an opportunity for a great public improvement, which may be lost for ever if the occasion is allowed to slip by without making the most of it.

ON SECRET PASSAGES.

By a COUNTRY ARCHITECT.

SECRET passages have a wonderful fascination for the human mind. They exist in multitudes all over the country, according to popular belief. There is not an ancient building but possesses at least one which leads either to the nearest church or else to whatever neighbouring edifice vies with it in antiquity. They connect buildings which are miles apart. In country places they pass under streams and through rocky hills. In towns they burrow beneath the sewers and cellars of crowded districts. No obstacle, either natural or artificial, seems to daunt them. So secret are they that no one has ever seen them; like Melchizedek, they have neither beginning nor end; none, at any rate, known to living man. But they are there: or at least they were there at some time, according to the information of the particular sexton or caretaker who has taken you in hand for instruction in the history of the building which he haunts for the time being.

Some years ago I stood on the top of a Border peel-tower in company with the owner and one or two friends. He was telling us the history of the little stronghold which the family had long deserted in favour of a more commodious dwelling built alongside in the eighteenth century.

"It was from here," he said, "that a daughter of our house was flung by her parents because she would not marry the man of their choice." Mild horror was expressed by the company. "Ah, you *must* obey your chieftain," he said. We looked over the parapet to see where the unfortunate lady fell. The tower stood on a rocky platform which sank steeply down to a stream; it was a most uncomfortable place on which to alight.

"By the way, do you see that house over there?" We eventually discovered in the distance, across the valley, a gleam of grey. "Well, there used to be a secret passage from this house to that—very useful when we were besieged." The company was vastly interested, for the passage must have burrowed beneath the stream and pursued its way through solid rock to its distant goal. Presently we descended as far as the principal chamber.

It need hardly be mentioned, perhaps, that these small peels contain, as a rule, but one room on each floor, with walls of great thickness. In one angle is a circular stone staircase leading from the basement up to the battlements and giving access to each storey: in the thickness of the walls are contrived one or two very small rooms.

Arrived at the principal chamber our guide

approached a small door. "I will show you how the secret passage was used. One of its chief purposes was to supply the besieged garrison with food, which was drawn up from it through a vertical shaft." So saying, he picked up several pieces of paper from a packet lying on an adjacent table and opened the door, disclosing an exceedingly small apartment. He lighted the paper and dropped piece after piece down a small shaft in the floor. "There, that's where they drew up the food." The ladies of the party were much impressed. Students of mediæval houses will realise, however, that the shaft was in fact a sort of prolongation of the human alimentary canal. The time was inopportune for conveying correct information on the subject; apart from which, our host's theory was much more agreeable and romantic than the truth.

Some year or two subsequently an estate agent wrote to me to ask if I were interested in secret passages, because he was going to investigate one in an ancient house under his charge, and would I come over and help? I complied with pleasure. It seems that a fire had caused some damage in the house, and the owner thought that the necessary process of reparation would afford a good opportunity of investigating two interesting things—the existence of a secret chamber, and the particulars of a secret passage connecting the mansion with the ruins of a still finer house some two miles off.

The origin of the fire was not without architectural interest. When the house was first built the great hall was provided with no fireplace, the fire being kindled on a hearth in the middle of the floor. The disposition of the roof timbers still indicates where the louvre stood which carried off the smoke. During the first half of the nineteenth century the then owner of the house built a new fireplace in a side wall and carried up a brick flue to the outer air. Someone subsequently built against this flue, on an upper storey, one of those little apartments which require a soil pipe. Regardless of what are now considered essential sanitary precautions, this apartment was contrived in a corridor in the middle of the house, its only contact with the outer air being at the top of a wide funnel which rose to the roof and was covered by a skylight. Such were early Victorian ways. The new flue, moreover, was jerry-built, and eventually caused the woodwork adjoining it to catch fire. Here was a pretty to-do—a fire started in the bowels of the mansion! Fortunately, with the help of the villagers, hastily summoned from morning service in the church, the fire was soon subdued, and incidentally opened a way for the investigation of the secret chamber and passage.

When I arrived on the scene a small group of

persons was assembled, comprising the agent himself, the oldest inhabitant of the village, the bailiff and a mason. The agent said that the owner, widow of the last lord, had told him that his lordship, on coming home once from hunting, had filled up the afternoon by rummaging about, and had penetrated into a secret room capable of holding fifty men. It lay somewhere beyond a certain large, dark closet or fuel-room. Then, besides this, there was the secret passage to which access was said to be obtained from a cupboard "behind the tiger in the hall."

The bailiff here spoke up, casting some doubt upon the existence of the passage; for, said he, if it led to the ancient ruin it must pass under the village street, and to his knowledge, although deep drains had been laid, no signs of such a passage had been found. Besides which, if it were, as supposed, two miles long (in order to arrive at the ruins), it must have been ventilated at intervals, and no traces of ventilating shafts were known to him.

But here the oldest inhabitant had his say, and in a cracked and quavering voice he told how, when they were digging years ago in the garden by the churchyard wall, they had come across a bit of a passage or something of the sort, built of dressed stone and arched over at a height of 7 feet or so. The fragment had been covered up again, but he could point out where it was. This information was an exhilarating set-off against the bailiff's doubts, and it was arranged that the remains of the passage should be found and exposed to view.

The company then moved off to look for the secret chamber, all but the oldest inhabitant, who was left sitting by the housekeeper's fire. Armed with a candle, we entered the dark fuel-room, and soon found a built-up recess in the wall. The quest began to grow exciting, and the mason eagerly hammered away at the recess. After a few minutes of hard work his hammer forced out a stone which fell into the dark void beyond. A few more minutes of breathless interest, and the hole was large enough for a person to pass. The mason went first to clear the way, the bailiff followed, then the agent, then myself. We were within the secret chamber! The feeble candle light, obstructed by the bodies of the explorers, revealed nothing but darkness. But there was a horrible smell. "Good Heavens," I cried, "let us get out of this, or we shall all be poisoned; if this isn't sewer gas, I don't know what is." So we all scrambled out again and sought the fresh air, leaving the secret chamber to get a little ventilation through the new opening. After an interval the mason was sent in again to reconnoitre, and, as he reported the atmosphere to be bearable, we clambered back, and explored the dark space. It accommodated us four, it is true, but we found that we nearly filled it. By the dim light we discovered the brick flue of the hall fireplace, and close to it a soil

pipe, which a very slight examination showed to be riddled with holes. Far over our heads was the burnt woodwork where the fire started.

It was soon obvious what the secret chamber really was. At some time in the eighteenth century an oblong room had had its angles rounded off by large curved partitions of lath and plaster; the space into which we had penetrated was one of the portions thus cut off. It was a useless space which the plumber no doubt thought was admirably adapted for the passage of his soil pipe. So vanished the secret chamber.

But this was not all. It seems that, much to everyone's surprise, the smoke of the conflagration had found its way in large volumes to her ladyship's bedroom, which was in another part of the ground floor. So I said to the agent, "Where that smoke could go, the sewer gas can go. You had better have the drains examined." And the end of the Adventure of the Secret Chamber was the rearrangement of the sanitary accommodation and the relaying of the whole drainage system.

There still remained the secret passage to investigate. Time was required, however, to unearth the fragment deposited to by the oldest inhabitant, and further exploration was deferred for a few days. At my next visit I found that the fragment had been discovered and laid bare. The old man's memory had not played him false. There were the dressed stone walls carrying the remains of a segmental vault at a height of about 7 feet. The width between the two side walls which carried the vault was about 6 feet, quite a convenient width for a passage. But the remains of these walls were very short, and the third wall (at right angles) must have ended the passage abruptly and without any obvious reason. It was out of the question that such a means of communication could have ended or started in the middle of nowhere, and a brief examination sufficed to dispel the idea that here was a fragment of a secret passage, and to substitute for it the more prosaic probability that the remnants were those of a cesspool.

All hope was not yet dead, for there still remained the cupboard "behind the tiger in the hall." Thither accordingly we went. The tiger—a fine stuffed animal—stood on a table at the end of the hall, and looked as though he had stood there unmoved for half a century. With reverent care we moved him away, and then the heavy table. Behind him, hitherto concealed by his huge body, we discovered a small door in the panelling—very small, thought I, to be the entrance to a secret passage. At a distance of some 10 feet on each side of the cupboard the wall containing it was pierced by a doorway. I pointed out to the agent that the beginning of the passage must be very steep to enable it to dive under either of these doorways, for the bottom of the cupboard was quite 4 feet from the floor. "True," he replied, "but we may as

well make sure." The thickness of the wall could be ascertained at the doorways. It was certainly thick, but still would only allow, at a liberal calculation, about a foot and a half for the width of the passage. "It may be thicker where the cupboard is," said the agent; "we cannot get to the back of it." So the mason set to work hammering at the stone wall which formed the back. It sounded hollow compared with those at the sides, and hope still flickered in our bosoms. At length, as formerly, a stone was dislodged, and the mason's hammer plunged into a dark void. Eagerly we rushed to examine the result.

The mason had broken into the flue from the heating apparatus in the basement.

Thus closed another chapter in the romance of an ancient house.

REVIEWS.

RIVINGTON'S BUILDING CONSTRUCTION.

Rivington's Notes on Building Construction: a Book of Reference for Architects and Builders and a Text-book for Students. In two volumes, Parts I. and II., edited by W. Noble Twelvetrees, new edition, entirely rewritten, with 879 illustrations. 8o. Lond. 1915. Price 7s. 6d. net per volume. [Longmans, Green & Co., 39 Paternoster Row.]

The position occupied by *Rivington's Building Construction* is one almost unequalled in the field of technical literature. For the past forty years it has been universally recognised as the most authoritative text-book on the subject of construction as affecting building work. Hitherto it has run through edition after edition without showing any great departures from the scope and arrangement of the original volumes. Now, however, the publishers have decided in favour of a complete revision, and the first two parts, which deal with general construction, apart from the questions of materials and structural mechanics, are the subject of this review.

Until the present issue the authorship of *Rivington's* has been anonymous, the title being derived from the name of the original publishers, and it would seem that the authority of the book has gained rather than otherwise by this circumstance. In the present edition not only has anonymity of authorship been thrown to the winds, but the work no longer bears the impress of a single mind. The two volumes under review comprise signed contributions by about twenty writers under the general editorship of Mr. Twelvetrees. While by this arrangement there is a certain loss of uniformity of treatment, which is a disadvantage from the standpoint of an elementary student, the result is more interesting and far more stimulating to a person already possessed of a fair knowledge of the subject. For this reason, and in consequence also of the very much wider scope of the present volumes as compared with the previous ones, it may be anticipated that *Rivington's* in future will be considered the text-book of the advanced rather than of the elementary student.

In addition to undertaking the obviously very arduous work of general editor, Mr. Twelvetrees is responsible for several chapters dealing with subjects of an engineering character. His contributors are, without exception, well versed in the subjects on which they write, many of them being well-known authorities on building construction. Each volume contains an interesting introduction by Mr. Reginald Blomfield, R.A. [*Past President R.I.B.A.*], in which he lays emphasis on the fact that, although good construction is by no means necessarily good architecture, it is an essential foundation for it, and must be mastered in all its details by the would-be competent architect.

Part I. commences with a very useful chapter on Building Regulations (Mr. Brook Kitchin [*F.*]), an important subject which has hitherto received scant attention in works dealing with construction. While the summarised treatment adopted is on the whole exceedingly good, it is in a few instances open to criticism. In the summary given of the important cases in which there is a right of appeal from the decision of the responsible authority in London, no mention is made of the rights of appeal under the London Building Acts (Amendment) Act 1905, which deals with means of escape in case of fire. Also, as regards the provincial building law, although several local Acts of the larger provincial towns are mentioned, there is no reference to the much more important Public Health Acts Amendment Act 1883 (Building in Streets), which regulates the building line of new buildings in practically all extra-metropolitan districts.

The chapters in Part I. dealing with general "carcase" construction of ordinary character under the headings of Sites and Foundations (Mr. H. V. Lancaster [*F.*]); Brickwork (Professor Beresford Pite [*F.*]); Masonry (Mr. W. Douglas Caröe [*F.*]); Walls, Piers and Retaining Walls (Messrs. H. W. Wills [*F.*] and C. Lovett Gill [*A.*]); Arches, Vaulting, and Domes (Mr. A. W. S. Cross [*F.*]); Chimneys and Stove Setting (Mr. W. Pywell [*F.*]); Carpentry (Mr. W. T. Sweet); Partitions (Mr. Alan E. Munby [*F.*]), all well sustain and in many cases exceed the high standard set by the writer of the original *Rivington's*. The same applies also in the case of the chapters in Part II. which deal with Timber Roofs (Mr. W. T. Sweet); Roof Coverings and Structural Plumbing (Mr. W. S. Purchon [*A.*]); Joinery (Mr. Matt Garbutt [*F.*]); and Stairs and Staircases (Mr. W. E. Riley [*F.*]). The writer on Timber Roofs deals very fully with his subject, and the illustrations given of advanced types of roof, including one of a wooden dome, will be very useful for reference in practical work. The detail of a hammer-beam roof is, however, of a very sketchy character. This type of roof, still used to a considerable extent in church work, is well worthy of detailed illustration, but has hardly yet received proper attention from the writers of text-books. The chapters on Joinery are exceedingly well written and illustrated. The subject is dealt with in a very thorough and logi-

cal manner, from the workshop processes of sawing, planing, moulding, and jointing the members, to the placing of the finished article in the building, together with all requisite fittings and furniture. If the whole of the new edition were up to the same standard as this section, it would indeed be a wonderful work. The chapter on Stairs and Staircases deals not only with ordinary stairs of wood and stone, but also contains a few useful notes on iron and steel stairs, on the construction of which the ordinary architectural draughtsman is often somewhat "at sea."

The temporary work involved in building construction is dealt with in Part I. under the headings of Timbering Excavations, Shoring, and Underpinning (Professor C. H. Reilly [*F.*] and Mr. Patrick Abercrombie [*A.*]); Scaffolding (Mr. Twelvetrees); Centres and Moulds (Mr. A. W. S. Cross [*F.*]). Generally speaking, these sections are sound work, but the illustrations with regard to centering for arches are hardly as complete and explicit as could be desired. They would be much improved by the addition of sections, and by the dimensioning of the spans, and the figuring of the scantlings of the members.

In Part I. are included chapters on Iron and Steel Work and on Steel Skeleton Buildings (Mr. E. Fiander Etchells [*Hon. A.*]). The first of these contains much useful and interesting matter. The portion dealing with riveting is particularly sound and clear, although the writer has doubtless felt himself awkwardly restricted in his treatment by the fact that the question of stresses, upon which, of course, the number, size, and spacing of the rivets principally depend, is reserved to be dealt with separately in Part IV. The chapter dealing with Steel Skeleton Buildings is also interesting, but, from the standpoint of the student, could have been improved by the addition of fully figured illustrations showing the construction of an all-steel building of the type largely used for engineering workshops. A further chapter by the same writer dealing with Steel Roofs occurs in Part II., and contains good detailed illustrations. This, and the section on Timber Roofs, is prefaced by a chapter written by Mr. Twelvetrees, which deals with points common to roofs of all materials.

The remaining chapters in Part I. are written by Mr. Twelvetrees and deal with Damp- and Sound-Resisting Construction; Reinforced Concrete; and Fire-Resisting Construction. The first of these contains good material, the usefulness of which, however, is greatly discounted by the lack of illustrations. The chapter on Reinforced Concrete is quite a good summary of the subject. That on Fire-Resisting Construction deals not only with the actual formation of floors, pillars, and other units of construction, but also includes very useful notes on fire-resisting design—a subject the importance of which rarely receives proper recognition.

The remaining chapters are in Volume II. That dealing with Plastering (Professor C. H. Reilly [*F.*] and Mr. Patrick Abercrombie [*A.*]) seems good as far

as the letterpress is concerned, but there is not a single illustration. In a treatise for the use of students it seems very unfortunate that the aid of the illustrator has not been invoked to deal with such subjects as the formation of zinc cornice moulds, the running of a cornice, and the bracketing of large cornices. The written word by itself seems inadequate to deal with constructional items of this kind. The subjects of Painting, Decorating, and Paperhanging are dealt with by Mr. Twelvetrees in a satisfactory manner, having regard to the rather restricted amount of space allowed for these subjects. It is a pity, however, that the first coat of paint after the priming should have been described as "the second coat," and the one after that the third and so on, having regard to the custom in specifications to describe the number of coats specified as additional to the priming.

The questions of Drainage and Sewage Disposal (Mr. W. Kaye-Parry [*F.*]) are the subject of a well-written chapter with good illustrations. The writer mentions that Roman cement has been extensively employed in Ireland for pipe jointing, and he appears rather to favour it for this purpose on account of its quick-setting properties. In dealing with Portland cement the old rule that it should be spread out and cooled before use is still set forth; but this practice is now rarely adopted, and with some cement might have a prejudicial effect by producing the air slaking of the material. The subjects of Water Supply, Plumbing, Sanitation, and Sanitary Fittings (Major H. Phillips Fletcher [*F.*]) are fairly well dealt with, but possibly have suffered a little in their treatment by the engagement of the writer on military duties. It is rather curious to find that, although waste pipes are fully described under a special heading, the references to soil pipes are scattered over several pages, and the word "soil pipe" does not appear in the index under either of its two heads. Heating and Ventilation, and Hot-Water Supply (Mr. A. H. Barker) are well treated. In the portion dealing with heating and ventilation the writer has steered a very successful middle course between the two extremes of an over-elaborate scientific treatment and a treatise on first principles only. The information given is of sound, practical value, and the explanations are very clear. The treatment of hot-water supply, having regard to the importance of the subject to everyone concerned in house construction, might have been a little amplified. For instance, in the diagram of the cylinder system, the cylinder is shown to be placed horizontally instead of vertically, and the cold feed pipe is shown to be connected to the return pipe of the primary circulation instead of to the cylinder. Both of the arrangements shown, particularly the horizontal placing of the cylinder, are considered undesirable by many heating engineers, and it would have been well if some arguments in favour of the methods adopted had been advanced.

The subjects of Gas and Electric Lighting, Electric Bells, Telephones, and Lightning Conductors are

dealt with in a very full manner by Mr. Twelvetrees. The illustrations of these sections are to a considerably larger scale than those of the remainder of the volumes, and it is rather a pity that they were not reduced somewhat, and the space thus saved made available in other sections where some of the illustrations are rather too small in scale.

Part II. concludes with a chapter on Fire Equipment (Sidney G. Gamble). This is a good, although very unusual feature in a work on building construction, and is one which specially appeals to practising architects, as there is very little literature dealing with the subject.

Each of the volumes has a fairly comprehensive index and contains also an Appendix consisting of selected examination questions of the principal societies and bodies that conduct examinations in building construction. Considered as a whole, although there is a certain unevenness in the standard achieved by the various writers, the two Parts of the new edition are a distinct success. They are a mine of information on subjects connected with building, and reflect considerable credit on the editor and his numerous contributors.

HORACE CUBITT [A.].

THE WORK OF THE BROTHERS ADAM.

Robert Adam and His Brothers: Their Lives, Work, and Influence on English Architecture, Decoration and Furniture. By John Swarbrick, A.R.I.B.A. 40s. Lond. 1916. £2 2s. net. [B. T. Batsford, Ltd., 94 High Holborn.]

Messrs. Batsford's latest production, which gives the keynote of sumptuousness and expensiveness of that famous publishing house, proclaims its parentage aloud. An increasing striving to produce in each case the most beautiful type, illustrations, and binding are doubtless to be commended. Such masterpieces as the Dilettanti Society's publications, Stuart and Revett's *Athens*, and Robert and James Adam's *Works in Architecture*—which latter is without doubt the finest architectural publication yet achieved, and that some hundred years ago—are models to be respectfully followed. Yet there is apparently an increasing tendency to produce architectural books in competition with popular magazines, to be read, laid aside, and forgotten: a leavening of anecdotes for the general reader, illustrations more beautiful as picturesque views than useful architecturally—in fact, a revival of the "Gems of Scenery" and sentimental art annuals of the early nineteenth century. Such works are not commenced in any critical spirit; they give bare descriptions, dates, and costs, with client's and private letters reverently reproduced—in fact, it almost seems that the immense advance in illustrative processes outweighs the value of the letterpress and that these beautiful books are produced solely for display. As a matter of fact, private details count for little; the breadth of an architect's mind is written upon his monuments—there is no need to search archives for that. The strength of Robert Adam's character, and

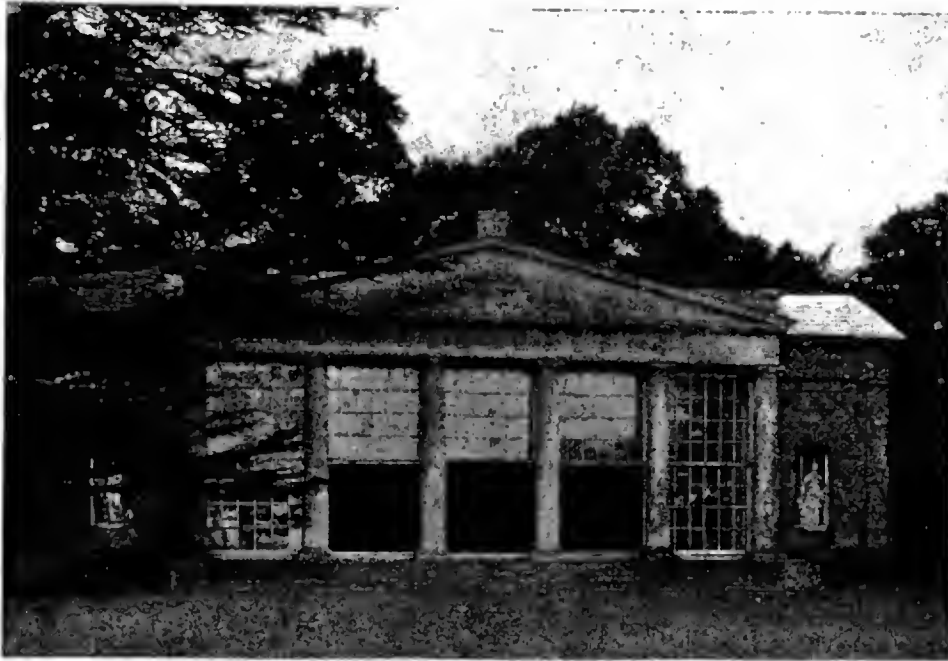
his great obstinacy, are apparent to all; his failure at large handling, except in rare cases, his excessive thinness, seen at its worst externally, are defects which reflect their author. See also his austerity of interior work, and its attendant need for rigorous furniture, mincing manners, and stiff respectability; no comfort or indecorous attitudes—even those voluptuous couches and the bacchanalian feasts of the Greco-Roman period, which inspired Adam's later work, are debarred.

The author prepared originally an essay on "The Work of Robert Adam," which was awarded the Architectural Association Prize in 1903, and this book is the outcome of its elaboration. In the introduction he gives a general sketch of architecture of the Renaissance, showing influences likely to be felt by the brothers, and proceeds with a sketch of their training and early life. Robert Adam visited Italy in 1754, at the age of twenty-four. He there made the acquaintance of Piranesi and Clérissiau, and prepared the drawings for his book on the Palace of Diocletian at Spalato, although this was not published until ten years later.

Generally speaking, the letterpress leaves a great deal to be desired. In referring to buildings, the author has an irritating way of giving vague descriptions of such important things as the principal rooms—for instance, "The Yellow Drawing Room, Red Drawing Room, the Garden Room, and the Ballroom, 91 feet long and 37 feet wide," details which convey nothing; also frequent references to other buildings not illustrated, equally futile unless one is familiar with either example. One also notes a repetition of the same quotation in different chapters. Descriptions are never other than meagre, and no criticism at all is attempted. The descriptions generally take the following form: "The chimney-piece resembles in general arrangement those . . . at Kedleston, Hopton and Stratford, now Derby House"; or, speaking of Kedleston, "The Entrance Hall and Rotunda are the most spacious and lofty apartments in the house, rising two storeys in height. The height to the top of the coved plaster ceiling of the Entrance Hall is 39 feet, and the height to the top of the Saloon dome measured internally is 55 feet." Again, "The long low seats under the niches of the walls are believed to have been designed by Robert Adam. Their form is supposed to have been suggested by ancient sarcophagi"—being extremely non-committal. There are also too many references to drawings in the Soane Museum; reference should be confined as far as possible to illustrations.

The illustrations are numerous and of fine quality, but, notwithstanding the enormous amount of ornament and furniture produced in the name or under the style of Adam, the number of details given is very small, nor are they of very representative character.

The bridge to Syon House exhibits a curious ramp towards the middle arch which is objectionable, conveying no sense of the incline of the roadway, and more



GREENHOUSE, CROOME COURT, WORCESTERSHIRE.



BOARD OF TRADE OFFICES, WHITEHALL (now demolished).
(Formerly the Offices of the Paymaster-General.)

suitable for staircases than stonework. The same idea is repeated in the bridge at Ayr. The ceilings (Figs. 17 and 134) exhibit strongly the influence of the Villa Madama, with the difference that a vaulted motive is applied to a flat ceiling, whilst those of Syon House and Croome Court are similar to those of the Palazzo Vecchio and other Italian examples. There is throughout the lighter ceilings a manifest striving for segmental lines, as though the motives had been taken originally from vaulted roofs. The ironwork, fireplaces, doorways, fanlights, &c., are of great magnificence and one could not have enough of them. From Croome Court are given a very successful greenhouse and rotunda, on airy lines and without that stiffness which gradually settled upon the style.

The garden front at Kedleston typifies the changes introduced by the Adams externally, and is perhaps better than their later work, as showing more life and vigour, a fine play of light and shade, and ornament not too attenuated. In later houses, such as Lansdowne House and Kenwood, the ornament externally is confined to severe anthemion or fluting in the members only.

Internally, Adam is at his best. He at first follows the domed or coved ceilings of the earlier eighteenth century, but later discarded all in favour of flat or slightly segmental lines which gave more scope for his Pompeian or so-called Etruscan arabesques. Many of the ceilings have a tendency to be all over alike, and the relief afforded by the painted panels is too abrupt or too widely spaced to be quite happy. The gradual flattening of all relief is very apparent in these photographs.

Syon House is undoubtedly Adam's masterpiece as far as interior work goes. The detail is full, more colours are employed, more strong spacing and relief and richness of materials (marble columns and floors, polished doors and gilt). The vestibule (Fig. 108) is extremely fine, as also are the Hall and Red Drawing Room. The Library at Kenwood is less rich but equally admirable, beautifully proportioned and detailed. The sedan chairs of Queen Charlotte and Lady Williams Wynn are delightful, the latter being about the last word in refinement.

The plans given are unfortunately too few, but they show the advances made by the brothers, although the repetition of segmental ends, as at Lord Derby's house and elsewhere, is too great a play upon a single motive.

The book concludes with work in Edinburgh and Glasgow, begun later in life and completed by other hands. Stratford House (Figs. 84, 184, 187), of which Adam's authorship is doubtful, provides two or three examples of the most charming refinement, displaying

a delicacy of touch and a simplicity which is unsurpassed.

The book will undoubtedly prove to be of great service, particularly as it is the first monograph on this very distinctive style. The author's know-



SEDAN CHAIR MADE FOR LADY WILLIAMS WYNN.

ledge of his subject is evidently of very great depth and shows a thorough mastery of available material; but it is to be regretted that he did not write more from a critical standpoint, though this might perhaps have produced too bulky a volume.

The publishers are to be congratulated upon the unvarying excellence of their publications, and whatever criticism one may find with this work—which criticism, it must be admitted, chiefly consists in not having enough of it—the publishers have produced a notable addition to architectural literature.

ROBERT ATKINSON [F.].



GILBERT MARSHALL MACKENZIE, B.A. Cantab., *Associate*
Captain, Seaforth Highlanders.
Killed in action (see p. 223).



THOMAS PAUL BAUSOR, *Associate*,
Second Lieutenant, Shropshire Light Infantry.
Killed in action (see p. 223).



ADRIAN THOMAS HARDMAN, *Student*,
Lieutenant, Royal Fusiliers.
Died of wounds (see p. 211).



LOUIS AUGUSTUS PHILIPS, *Associate*,
Sergeant, Public Schools Bn., Royal Fusiliers,
The Rugby Football International Player.
Killed in action (see p. 189).



9 CONDUIT STREET, LONDON, W., 20th May 1916.

ARCHITECTS AND MILITARY SERVICE.

A number of members of the Royal Institute of British Architects who are about to enlist in the Army or to be summoned to the Colours under the operation of the Military Service Acts have called the attention of the Council to the desirability of making arrangements to enable them to enlist in a selected Corps, so that they will have the advantage of serving with a number of men of their own class and profession. With the approval of the Central Recruiting Depot arrangements have accordingly been made with the Queen's Westminster Rifles, one of the oldest and most distinguished of the London Territorial Regiments. Applicants must, of course, be fit for general service and must be capable of passing the tests imposed by the Regiment. Any members (whether attested or unattested) who desire to take advantage of this opportunity should apply *immediately* to the Officer Commanding, Administrative Centre, Queen's Westminster Rifles, 58 Buckingham Gate, S.W. They are invited to call on any week day (except Saturday) at 2 p.m., and they should state that they desire to take advantage of the arrangements made with the Royal Institute of British Architects.

The R.I.B.A. Record of Honour: Twenty-ninth List.

The following is the Twenty-ninth List of Members, Licentiates, and Students R.I.B.A. serving with the Forces, the total to date being 60 Fellows, 445 Associates, 242 Licentiates, and 273 Students:—

FELLOW.

Poynter, Ambrose: Lieutenant R.N.V.R.

ASSOCIATES.

Colville, David: Sergt., 24th Bn. Victoria Rifles, 2nd Canadian Contingent.
Cooper, J. G.: 28th Bn. Royal Fusiliers.
Douglass, H. A.: Captain, B.E.F., France.
Dovaston, John: R.N.A.S. (Anti-Aircraft Corps).
Hampson, Joseph L.: 1st City San. Co., R.A.M.C.
Kenchington, Herbert: Civil Service Rifles.
Kipps, P. K.: R.N.V.R.
Knight, F. W.: 195th Bn. Canadian Exp. Force.
Neave, S.: Royal Engineers, Australian Exp. Force.
Walker, T.: Royal Garrison Artillery.
Wilson, H. J.: Royal Engineers.

LICENTIATES.

Barker, Walter C.: Royal Garrison Artillery.
Caryer, G. T.: Royal Engineers.

Cotman, Graham: 3/2 East Anglian Field Ambulance, R.A.M.C.

Evans, E. Hollyer: Royal Field Artillery.

Knapman, H. L.: Royal Engineers.

Lunan, T. M.: 2nd Lieut. 3/8th Scottish Rifles.

Moffat, B.: Royal Naval Air Service.

Puntin, J. H.: Durham Light Infantry.

Ross, R. T.: Royal Engineers.

Promotions.

Lieut.-Col. A. B. Hubback [F.], serving in France, who was recommended for gallant and distinguished service in the field in Sir John French's Despatch of the 30th November last, has been promoted to the rank of Brigadier-General.

Lieut. J. G. Hudson Holdgate, R.E. [Licentiate], has been promoted to Captain, R.E., dating from 31st January.

Mr. H. V. Lawton [Student] has been promoted to Full Lieutenant R.E. Bridging Train.

The "Irish Builder" on the Devastation of Dublin.

The *Irish Builder* for the 13th May should be consulted for a detailed and admirably illustrated description of the devastation in Dublin which has resulted from the recent lamentable events in Ireland. The journal itself has suffered the loss of its offices in Lower Abbey Street, the building having been totally destroyed by fire; and the home of its distinguished next-door neighbour, the Royal Hibernian Academy, has met a similar fate, together with its valuable collection of miniatures and other works of art, the library, records, the series of portraits of R.H.A. Presidents extending back for nearly a century, and the pictures of the annual exhibition then being held. It is noted with pleasure that no member of the architectural profession has suffered in life or limb. Mr. Harry Allberry [A.], of the Office of Public Works, had a narrow escape, being one of the Veterans' Volunteer Corps (the G.R.'s) who came under heavy fire at the outset of the disturbances, when four or five lost their lives and ten others were wounded. The actual damage, extensive as it is, has been almost entirely confined to the Sackville Street area. Fortunately, the loss to the city of buildings of historic or architectural interest has been surprisingly small. Giving some impressions of the scene, the Engineering Correspondent says:—

It was an awesome experience to visit the devastated area after quiet had been restored. Rumours of frightful conflagrations and bombardments had reached the suburbs, while the skies at night bore witness to their truth. But even the most imaginative mind must have failed to conjure up such a scene of desolation as now exists in the centre of the city. Gaunt walls with staring apertures serve as tottering monuments of great business houses which three weeks ago were humming hives of commerce. Architecture is converted into heaps of builders' rubbish. The General Post Office, a building renowned for its beauty and associations throughout the world, is but a shell; the new public office, upon which so much labour and mency has been expended, and which had just been opened, is no more. The only structure in the whole fire-swept zone that is still standing is that block of the Post Office which was erected some six years ago in Princes Street, the walls and floors of which to the ordinary observer appear to be practically intact. Closer inspection, however, reveals that the floors and roof are cracked and shaken, but their fire-resisting qualities have undoubtedly saved the larger building in which they were situated from collapse. This

seems to be all that has been saved from the wreckage, and is a striking testimony to the value of fire-resisting construction in which the steelwork is protected from the direct action of the flame by a casing of plaster or similar material. In other cases exposed girders and stanchions have expanded and twisted with the heat, and the superimposed brickwork and masonry have utterly collapsed.

It has been suggested that the reduction of the insurgents garrisoning the houses in this area might have been effected by less drastic methods. This view, however, is not shared by competent and impartial observers. Rifle fire, while dangerous to non-combatants, was not effective against protected sharpshooters in well-chosen positions, and a process of starvation, against determined men provisioned with a certain amount of rations, would have been very slow indeed, and have involved the starvation of thousands of innocent non-combatants. As it was, these suffered very severely. The general opinion seems to be that the methods adopted were inevitable in the circumstances.

Some consolation, however, is derived from the rebellion. The leading article says:—

The homely saying, "It's no use crying over spilt milk," applies very forcibly in this instance. It is for the citizens to apply themselves vigorously to getting things going again, and to rebuild what has been destroyed. . . . If what has happened means much loss to the traders of the areas affected, it will, on the other hand, bring some much-needed work to the Dublin building trade and the architectural profession. We may with some degree of hope look forward to seeing a newer and finer Sackville Street arise from the ashes of the old. . . . A unique and unexpected opportunity is afforded for putting into practice the true principles of town planning, and we trust that when the time comes all those concerned will combine to give Dublin a piece of architecture worthy of this historic street, and an improvement on the nondescript patchwork collection of houses which formerly made up the façades.

Another writer says:—

We conceive it to be the duty of the Corporation, and of the Institute of Architects in turn to press upon them that duty, to see to it that when the time comes the rebuilding of Lower Sackville Street be undertaken in a manner worthy of that noble thoroughfare and of the metropolis of Ireland. . . . In face of the disaster which has befallen the owners and occupiers of this property, there will be in many cases a temptation to rebuild in a cheap and flimsy manner to meet the needs of the moment. This should not be permitted. If temporary structures are necessary, let them be frankly temporary—corrugated iron, expanded metal, or the like—and removed as circumstances permit. But in regard to buildings intended to be permanent, a uniform scheme should be adopted. We do not mean that every householder should be compelled to erect a replica of his neighbour's house. . . . Neither do we suggest that traders should be forced to build elaborate art stone frontages; but measures should be taken to prevent one man building a roasting red brick and yellow terra-cotta house, his neighbour a limestone building, the man next that again a stucco front, then perhaps granite, and maybe a Portland-stone-fronted bank beyond that to relieve the monotony. . . . To our mind it would be very fitting for the Institute of Architects in Ireland to give a lead in these matters. No other body can speak with a like authority, and we do not believe that there is a single person who would resent such action.

Civic Arts Association Competition for Memorial Designs.

The detailed Conditions are now published of this Competition, a preliminary notice of which, with particulars of the prizes and subjects of competition, appeared in the last issue of the JOURNAL (pp. 231-32).

Each of the eight classes will be judged by a jury of not less than three chosen by the executive from amongst a number of distinguished architects, sculptors, and painters. Drawings and models must be sent in by Monday, the 10th July. The prize designs and such others as may be chosen for the purpose will be exhibited by the Civic Arts Association at the R.I.B.A. Galleries during the month of July. The Association reserves the right to exhibit selected designs in the provinces after the London Exhibition. The prizes are independent of any commission payable for the use of the designs after execution. Copies of the Conditions may be obtained on application to the Secretary, Civic Arts Association, 28 Prince's Gardens, S.W. A P.O. for 1s. and a stamped and addressed envelope must be sent with the application, but the P.O. will be returned on the receipt of a *bona-fide* design.

From the fuller details now available a very interesting competition may be expected in Class I. The subject is a Design for a Monument suitable for erection in the centre of the members' courtyard at the new County Hall in commemoration of employees of the London County Council who have fallen in the War. A cross is to form part of the design, and the symbolism is to be religious. The general character of the monument is to be sculptural rather than architectural, but with due regard to its setting. The view of the entrance doors from the Westminster Bridge Road must not be too much obstructed. The cost of the monument must not be unduly large. It is stated that the London County Council is in no way committed either to the memorial or to the designs which may win the prize, but the Civic Arts Association will submit the prize designs to the London County Council for its consideration. The materials of the monument are to be Portland or Purbeck stone, or stone and bronze, not marble. The drawings are to include plan and one or more elevations to a scale of half an inch to the foot, and such other details to a larger scale as the competitors may desire. Competitors may also submit a perspective drawing or a model, or both. The first prize is £50; the second, £15.

Classes II., III., IV., and V. are designs for Wall Tablets, prizes being offered by Messrs. J. W. Singer & Sons, Frome; Messrs. Martyn, Cheltenham; Mr. H. A. Bartlett, Chairman of Messrs. Battiscombe & Harris. The prize-givers in these classes reserve to themselves the right to carry out any design submitted on payment to the designer of royalties of 10 per cent. on the value of all tablets executed from the designs.

Class VI. consists of Designs for a Wall Painting, such as might be carried out in the hall of a Boys' Club or Board School to commemorate members or scholars fallen in the War. The subject may be either religious, allegorical, legendary, or an actual scene in modern warfare. Designs should be suitable for carrying out either (a) in fresco, tempera, or in some washable material on the walls; (b) in oil or tempera on canvas, or in tempera or body colour on paper stretched over canvas, in removable frames.

Class VII. consists of a Fountain, architectural or sculptural, or a combination, for an open site in a country town or village, in memory of the local soldiers who have lost their lives in the War. Estimated cost of execution not to exceed £200. The Right Hon. Charles Booth offers prizes of £20 and £5.

Class VIII. consists of Inexpensive Memorials for the

'Home,' such as tablets, medallions, frames for Rolls of Honour and photographs, caskets for mementoes or stands for holding medals, etc. The best submitted will be exhibited in the hope that manufacturers will enter into negotiation with the authors with a view to reproduction. These inexpensive memorials should be capable of being made in quantities at prices varying from 5s. to £2 each.

The proprietors of *Country Life* place at the disposal of the Jury £25 and six copies of Mr. Lawrence Weaver's *Memorials and Monuments* as consolation prizes for award to designs other than those gaining First and Second Prizes which show merit in any class.

THE LATE ROBERT ALEXANDER BRIGGS [F.].

I feel sure that many old members of the Institute and Architectural Association will be genuinely sorry to hear of the death of Mr. R. A. Briggs, which took place in London on Wednesday, 10th May. The sad event must have come as a shock to his architectural friends, to whom he has been familiarly known for many years past as "Bungalow Briggs."

I first made Briggs's acquaintance in the year 1889, while travelling in France on my Soane Medallion tour. This chance meeting took place in the old Cathedral town of Chartres, and partly owing to the circumstance that he was the Soane Medallist of some five years priority we then started a lasting friendship.

Briggs was a man of marked personality, rapid in thought and quick of action. His keen sense of wit, combined with a genial disposition, never failed to make an impression on all who came in contact with him. He was an extremely well-read man, a brilliant conversationalist, a talented musician and composer of songs. These attainments and gifts attracted many people to him.

He made a good host and was never happier than when he had a few friends gathered round him for a musical evening. On these occasions he was a willing accompanist on the piano, but he always maintained that his favourite instrument was the organ, and used to speak of the old days when he conducted the service in the school chapel at Sherborne. As well as being musically inclined, Briggs, when opportunity occurred, was fond of shooting and fishing. His keen personal interest in everything he undertook is exemplified by his useful invention of the "Fly and Cast Box" well known to sportsmen.

He started practice as an architect in 1884, and, coming of a large family not very well provided for, he was obliged to devote all his energies to his profession, for which he was well equipped, being a splendid draughtsman and colourist, besides being endowed with exceedingly good business qualities. His practical mind concentrated on improving the designs and plans of small country residences at a time when this class of building was almost entirely the production of the local builder. Within seven years of starting his practice he had produced quite a large number of bungalows and small houses, built chiefly on country estates, such as Bellaggio, in Surrey.

Having succeeded so far, the idea occurred to Briggs to publish his bungalow designs in book form and thus supply a want which he then maintained had not hitherto been filled by previous works on the same lines. In the preface to his book Briggs asks, "What is a bungalow?" and then proceeds in his characteristic way to say, "A cottage is a little house in the country, but a bungalow is a little country house, a homely, cosy little place, with verandahs and balconies." The first edition of *Bungalows and Country Residences* came out in 1891 and, since that date, under various titles, this successful little book has extended into no fewer than five editions.

Briggs's literary and artistic attainments led him to write numerous articles on architecture and decoration. An article on "Designs for Pianoforte Cases," published in *Furniture and Decoration*, resulted in cases being greatly improved. Lastly, in 1911, Mr. B. T. Batsford brought out his delightful work on *Pompeian Decoration*.

That the Bungalow period was only a stepping-stone to his career is proved by the many large works which he afterwards carried out during a busy practice which extended until quite recently. His most important domestic works were the rebuilding of Cowley Manor, Gloucestershire, and Battenhall Mount, for the Hon. A. Percy Allsopp.

Briggs also was a church architect, and few people are aware that the beautiful stone-screen, altar and reredos in the Jesus Chapel, Worcester Cathedral, were erected from his designs and carried out under his own personal supervision. He was never very successful in competitions, although he was ambitious enough to submit a fine Gothic design for the Liverpool Cathedral.

In the affairs of the R.I.B.A. he did not take a very active part, but he frequently attended the meetings. He also acted as a member of the Board of Examiners for several years, under the chairmanship of the late Mr. Arthur Cates.

During the past four or five years, possibly owing to failing health, his practice seems to have gradually diminished, and with the outbreak of the war his hopes of recovering lost ground received a severe blow, but he nevertheless presented to the world a philosophic cheerfulness.

It is much to be regretted that, owing to an evident misunderstanding on the part of his relatives, sufficient notice was not given to the R.I.B.A. as to the day and hour of his burial. There appears to have been no public announcement of his funeral, and, consequently, some of his closest professional friends were prevented from paying a last tribute to his memory.

AND. N. PRENTICE [F.].

Robert Alexander Briggs was articled at the age of eighteen to Mr. G. R. Redgrave (son of Richard Redgrave, R.A.), of Broadway Chambers, Westminster, for three years. He attended lectures at the Royal Academy, and the classes and lectures at the Architectural Association.

From 1879-83 he was assistant in the offices successively of Mr. G. Moreing, Messrs. Isaacs and Florence, Mr. E. C. Lee, and Mr. J. J. O'Callaghan (Dublin). In 1883 he was awarded the Soane Medallion and £50 for a Design for an Academy of Music. He started practice in 1884 at 36 Chelsea Gardens. Among his works were the following:—House for Sir John Hall Rusholme, New Zealand; Church at Macolesfield (in conjunction with Mr. Kilbrite); four bungalow houses at Bellaggio, Surrey; houses at Sutton, Northwood, Wembley, Pinner, North End, Hampstead, D'Abernon Common, Burgh Heath, Kingswood, Maidenhead, Stanmore, Lee, &c.; alterations at Queen's Gate Hall, S.W., 8 Seville Street, &c. He was the architect of the private chapel, Worcester, for the Hon. P. C. Allsopp; the memorial at Evesham to Simon de Montfort; mansion at Farnborough for Hon. J. Scott Napier, Cowley Manor House, Gloucestershire, &c. He was elected Associate of the Institute in 1882 and Fellow in 1892. Mr. Briggs was instrumental in securing for the Institute the valuable and interesting collection of drawings and designs by James Burges, A.R.A., some of which were exhibited in the Common Room a few weeks ago and described by Mr. Briggs in an article entitled "The Art of James Burges, A.R.A." (*JOURNAL R.I.B.A.*, 19 February 1916).

CORRESPONDENCE.

Manchester Society of Architects: Official Architecture.

The Guildhall, E.C. : 15th May 1916.

To the Editor, *JOURNAL R.I.B.A.*

DEAR SIR,—Your readers are indebted to you for publishing on p. 230 of the *JOURNAL* of the 6th inst. extracts from the annual report of the above Society. It is remarkable in more ways than one. The report states: "The Manchester Society of Architects . . . represents the Royal Institute of British Architects in the Manchester district"; but as By-law 80 is to the effect that "the Royal Institute shall not be responsible for any acts . . . which may be done . . . by any Allied Society," I fail to see how the Manchester Society can claim to represent the R.I.B.A.

The Society approached the Manchester City Council asking that the City Architect should not be employed "in the future development of the City," but that the work should be given to architects in private practice. The applicants pleaded that work by officials is more costly than work executed by architects in private practice; the reasons are set out at some length, and special reference is made to school buildings.

Our Council have decided that a general discussion on official architecture shall not take place until after the publication of the Official Architecture Report; consequently I only give extracts from published information.

In 1911 a Report was published by the Board of Education on the "Abstracts of Evidence taken before the Departmental Committee on the Cost of School Buildings." This Committee held 16 meetings and examined 30 witnesses, and also visited many buildings in various parts of the country; it communicated with the Council of the R.I.B.A., and three witnesses

were nominated by our Institute. Paragraph 14 of the Report states: "The evidence . . . appears to us to illustrate the advantages which may be obtained by an intelligent study on the part of local officials of the problem of securing an efficient and sanitary school building at a minimum cost." "On the other hand, as far as ordinary Elementary School buildings are concerned, the evidence which we have received leaves on us the impression that competitions are, as a rule, a waste of time and money. It is claimed by their supporters that they not only give new men a chance, but promote progress and the introduction of new ideas. Unfortunately experience in this respect is paradoxical."

I can find nothing in the Report to suggest that an architect in private practice should be employed in preference to an official. The Report also states: "The intentions of those authorities who depend on competitions for getting the most economical and up-to-date designs are no doubt excellent, but they usually defeat themselves" (Paragraph 60).

A "Report of the Committee of Inquiry into the Architects and Surveyors and Engineering Divisions of H.M. Office of Works, London," was made to the Lords Commissioners of His Majesty's Treasury and published in 1914 (T. Fisher Unwin, London: price 3d.). The Committee stated they had the advantage of the views of two of our Past-Presidents, and "were assured" by them "that an architect in private practice designs all the architectural details of his work with his own hand." The Report also states: "We do not feel satisfied, therefore, that, even from the purely artistic point of view, the State cannot obtain good results from the employment of an official architectural staff. From the administrative and financial point of view, the arguments for employing such a staff appear to us stronger." "The question is whether outside architects should not be employed on the more important new works. These are just the cases, however, where the employment of an official staff is cheapest—the cost, as a percentage of the expenditure on the work, falling in typical cases as low as 2 per cent. Further, as the Office of Works undertakes the maintenance and alteration of buildings in its charge, it is in many cases of advantage to the Department to have within its own walls the architects and draughtsmen associated with the original design and erection of the buildings. It seems clear, therefore, that the employment of an official staff is in many cases more convenient to the Department and involves a smaller payment for architectural services. But, further, we think that the experience of the official architects must often enable them to produce more suitable and cheaper buildings" (Paragraphs 43-44).

On 18th February 1913 the Chairman of the Establishment Committee of the London County Council stated that the cost of the staff engaged on new school buildings, including establishment charges, worked out at less than half the R.I.B.A. Scale (see *JOURNAL R.I.B.A.*, 8th March 1913, page 315.)

Again, in the JOURNAL R.I.B.A. of 10th December 1904 (page 104) the Report of the R.I.B.A. Committee on "Municipal Officials and Architectural Work" states that questions were sent to "all the members of the Committee and to various representative architects practising in the provinces." All the Presidents of Allied Societies were on the Committee. As a result of those enquiries the R.I.B.A. Committee came to the conclusion with regard to an Official Architect's Department for local public works that, "Financially much may be said in favour of the establishment of such a department."

SYDNEY PERKS, F.S.A. [F.]

MINUTES.

At a General Meeting (Ordinary) held Monday, 15th May 1916, at 4.15 p.m.:—Present: Mr. Ernest Newton, A.R.A., President; Mr. E. Guy Dawber, Hon. Secretary, and a number of Fellows and Associates (including 6 members of the Council)—the Minutes of the Annual General Meeting, held 1st May, having been published, were taken as read and signed as correct.

The Hon. Secretary having announced the decease of George Thomas Hine, *Fellow*, and Robert Alexander Briggs, *Fellow*, it was resolved that the regrets of the Institute for the loss it had sustained by the decease of its esteemed Fellows be entered in the Minutes, and that a message of sympathy and condolence be forwarded to their nearest relatives.

The Secretary announced that the following candidates had been nominated for election—viz.: As FELLOWS: George Reginald Farrow [A. 1908], Charles Edward Varndell [A. 1900, *Grissell Medallist* 1900], together with the following Licentiates who have passed the qualifying examination: Edward Cratney (Wallsend-on-Tyne), Gilbert Henry Lovegrove, Briant Alfred Poulter, James Thomson; As ASSOCIATES: Cyril Cliff Cheek, Henry Colbeck, James Simpson Fyfe, Charles Henry Gale, Ernest Gee, Claude Edgar Hill, James Vincent Hull, Clarence Spencer Picton, Herbert Thompson Rainger, James Wilfred Rough, Gilbert Vinden.

The proceedings closed and the meeting separated at 4.30.

NOTICES.

A GENERAL MEETING (BUSINESS) will be held on MONDAY, 5TH JUNE 1916, at 4.30 P.M. precisely, for the following purposes:—

To read the Minutes of the Meeting held Monday, 15th May 1916; formally to admit members and Licentiates attending for the first time.

To proceed with the election of the following candidates for membership, under By-laws 8, 9, and 10:—

As FELLOWS (6).

FARROW: GEORGE REGINALD [*Associate* 1908]; Amberley House, Norfolk Street, Strand, W.C.; and "Dinant," 75 Downton Avenue, Streatham Hill, S.W.

Proposers: W. G. Wilson, Ernest Newton, A.R.A., Howard Chatfield Clarke.

VARNDELL: CHARLES EDWARD [*Associate* 1900, *Grissell Medallist* 1900]; 1 Whitehall, S.W.; and "Foxcote," St. Leonards Road, Surbiton.

Proposers: Robert Atkinson, W. Curtis Green, H. Austen Hall.

Together with the following Licentiates who have passed the qualifying Examination:—

CRATNEY: EDWARD; 88 Station Road, Wallsend-on-Tyne; and Rose Hill, Willington-on-Tyne, Northumberland.

Proposers: Henry C. Charlewood, J. A. Gotch, Jno. T. Cackett.

LOVEGROVE: GILBERT HENRY; 374-378 Old Street, E.C.; and 72 Hornsey Lane, Highgate, N.

Proposers: Banister F. Fletcher, Howard Chatfield Clarke, J. Douglass Mathews.

POULTER: BRIANT ALFRED; Craig's Court House, Whitehall, S.W.; and "Old Dean," The Chase, Coulsdon, Surrey.

Proposers: Maurice B. Adams, W. Ravenscroft, Rowland Plumbe.

THOMSON: JAMES; City Architect, Dundee; 324 Blackness Road, Dundee.

Proposers: P. H. Thoms, A. Lorne Campbell, John Wilson.

As ASSOCIATES (11).

[All candidates passed the Qualifying Examination last year.]

CHEEK: CYRIL CLIFF [S. 1912]; 36 Crookerton Road, Wandsworth Common, S.W.

Proposers: T. P. Figgis, Leonard Stokes, E. Guy Dawber.

COLBECK: HENRY [S. 1909]; c/o Messrs. Moore Smith & Durrant, 14 Union Court, Old Broad Street, E.C.; and 26 Bramley Road, Ealing, W.

Proposers: J. R. Moore-Smith, W. H. Atkin-Berry, Arthur Crow.

FYFE: JAMES SIMPSON [S. 1913]; City Architect's Office, Town Hall, Sheffield; and 147 Hunterhouse Road, Ecclesall.

Proposers: F. E. Pearce Edwards, Jno. Watson, F. W. Deas.

GALE: CHARLES HENRY [*Special Examination*], M.Inst.C.E.; Public Works Department, Hong Kong, China.

Proposers: A. Colbourne Little, H. W. Bird, Edward A. Ram.

GEE: ERNEST [S. 1913]; Cathedral Chambers, Chester; and 8 Belvidere Road, Gt. Crosby, Liverpool.

Proposers: Professor C. H. Reilly and the Council.

HILL: CLAUDE EDGAR [S. 1911]; 1/2nd London Sanitary Co. R.A.M.C. (T.); and 35 Collegiate Crescent, Sheffield.

Proposers: Edwd. M. Gibbs, J. B. Mitchell-Withers, S. Perkins Pick.

HULL: JAMES VINCENT [S. 1913]; "Lofthouse," near Gars-tang, Lancashire.

Proposers: Professor C. H. Reilly, Charles B. Pearson, Leonard Stokes.

PICTON: CLARENCE SPENCER [S. 1913]; 13 Queen Anne's Gate, S.W.; and 73 St. Donatt's Road, New Cross, S.E.

Proposers: J. W. Stanley Burmester, Professor Beresford Pite, E. H. Bouchier.

RAINGER: HERBERT THOMPSON [*Special Examination*]; Sibbersfield, Charlton Kings, Cheltenham.

Proposers: H. W. Chatters, E. Guy Dawber, and the Council.

ROUGH: JAMES WILFRED [*Special Examination*]; Invercargill, New Zealand.

Proposers: The Council.

VINDEN: GILBERT [S. 1912]; 57 Eastern Avenue, Reading.

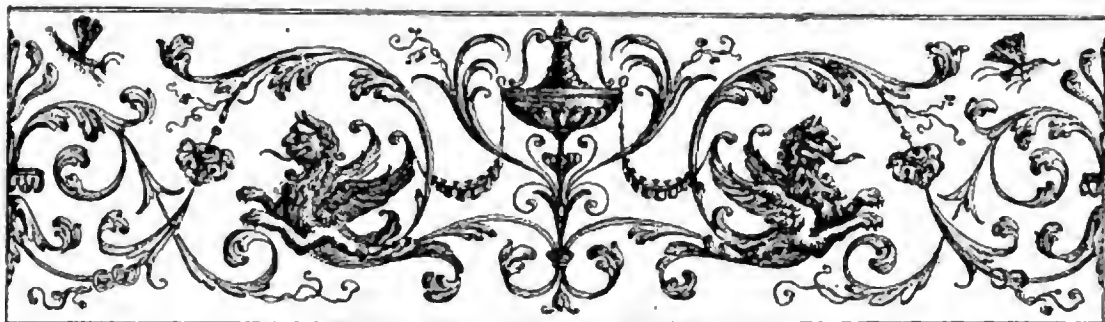
Proposers: W. Roland Howell, Chas. Steward Smith, Geo. W. Webb.

On View in the Common Room.

A Collection of Drawings of old work and Sketches and Designs by the late CHARLES EDWARD MALLOWS, F.R.I.B.A., kindly lent by his widow.

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THE GEOMETRIC CUBIT AS A BASIS OF PROPORTION IN THE PLANS OF MEDIÆVAL BUILDINGS.

By F. BLIGH BOND [F.].

IN response to an invitation to contribute a Paper on a subject of interest to the profession at large, the writer offers in the following essay a theory which he has for some time past been testing, and which tends in his opinion to explain a principle of proportion found in many mediæval works for which an adequate explanation seems to have been lacking. Much research and good scholarship will be needed in order to establish his theory and to win it general acceptance—should it be found to merit that reward—but the writer's apology for putting it forward at the present stage of his research is that it answers, or appears to answer, equally the historical as well as the practical and arithmetical tests, and to reconcile in a remarkable way certain doubts and contradictions.

In order to clear the position it will be necessary to state briefly a few well-known facts accessible to students in recent editions of *Gwilt's Encyclopædia* and in works therein referred to. It appears from contemporary records that there were in the Middle Ages two rival geometrical systems for setting out the ground plans of churches and other Gothic buildings, and these were also applied to their cross sections and sectional elevations. These were:—

- (1) A system of commensurate squares.
- (2) A system of equilateral triangles, which, when contained in parallelograms, gave a rectangular field or setting.

Our chief authority for these is Cesariano, the sixteenth-century translator (or editor) of the works of Vitruvius. Both systems were habitually applied, and there are records extant of controversies which took place between adherents of the rival schools. The first rule, that of the commensurate squares, is called by Cesariano the rule "a pariquadrato," and the second, the rule "a trigono." The first was adopted by the German architects and became more or less identified with their system. The second seems to have been favoured by the Latins, but it will be well not to be too insistent upon this point in the present stage of research.

THE AIM OF THE SYSTEMS.

We now begin to break new ground. The question arises: Were the two methods of planning designed to produce results of a different nature, or were they meant to yield effects approximately similar? The question is of crucial importance, and its answer implies also the solution of some obscure points of mediæval planning, and the discovery of the principle at stake in these bitter controversies.

WHAT WAS THIS PRINCIPLE?

In the writer's view, it was one of geometrical perfection, the object being the reproduction of the form of the Rhombus of two equilateral triangles in the greatest degree of accuracy consonant with practical methods of building and harmonious scales of measurement. As to the motive which led the

ancients to their preference for geometric truth—that is another question. For the moment we are on safe ground in accepting it as an axiom of their system that they did work where possible on geometric lines, and that from very early times a peculiar respect—even a sanctity—attached to those proportionals which most clearly accorded with the mathematical principles known to Master Masons.

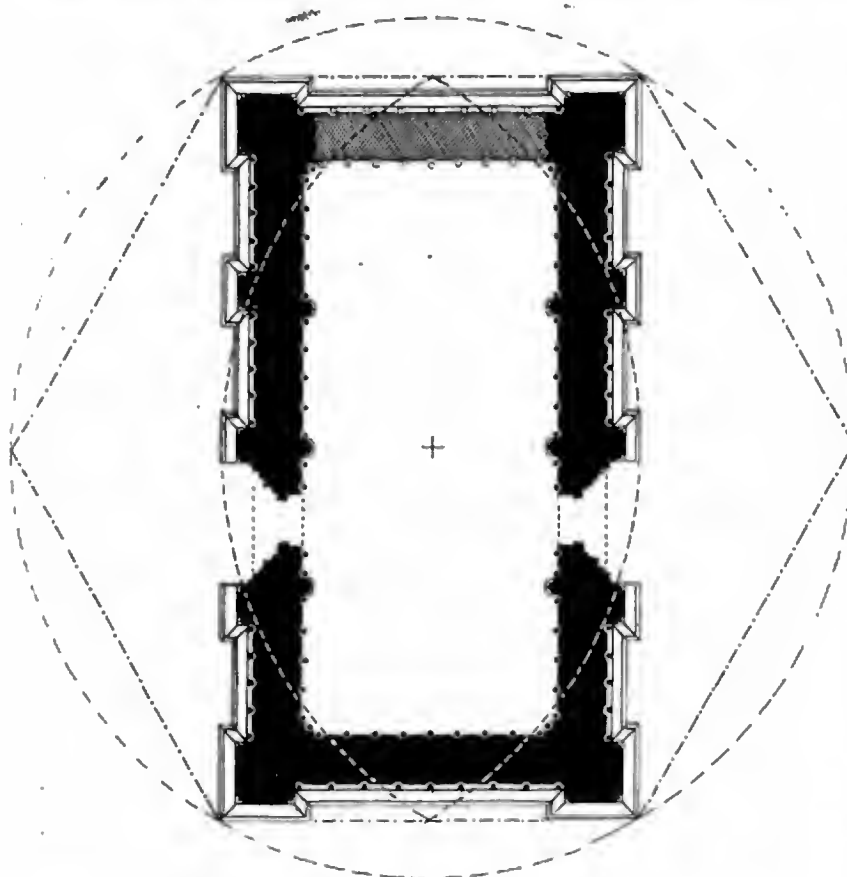
From this it will be inferred that the contest was one between principle and compromise, the rule "a trigono" being the use of the purist school, and that "a pariquadrato" of the practical builders. The "German" school, logical and practical, preferred to work on a system wherein the measures of length and breadth were commensurate or uniform, whilst their idealist opponents saw in this something approaching a profane disregard of principles instilled into their guilds by the teaching of a tradition so old, so venerable, that to depart from it was architectural heresy. But even they must have perceived and found by experience a limit of possibility in practical working, and hence in Cesariano we find in the instance he gives of the designing of the Cathedral of Milan a reconciliation of the two ideals.

THE RHOMBUS OR VESICA.

Readers are referred to Gwilt (Ch. IV. sec. 3) for an exposition of this highly symbolic feature, based upon the construction given by Euclid in his first proposition. Among all the select proportionals

used by the old builders, this, the ratio of length to breadth in the double triangle, seems to stand apart in a position of pre-eminence. Not only do we find it reproduced in many approximations in the plans of our own and continental churches, but it is notoriously used in Gothic detail wherever the architectural expression of the best periods reaches its highest point. And its association with certain parts of a church and with statuary of a certain order leaves no doubt of its symbolic intent.

Modern writers have discovered and chronicled many examples of these proportionals in our mediæval plans. Notably Kerrich, in his communications to the Society of Antiquaries in the second decade of the last century, has furnished us with material for reference, and following him comes Professor Cockerell with his analysis of the works of William of Wykeham, in



■ INDICATE EXISTING WALLS
 ▨ " FORMER EAST WALL

GLASTONBURY ABBEY, SOMERSET: CHAPEL OF ST. MARY THE VIRGIN.
 PLAN SHOWING RHOMBIC PROPORTIONS.

which the rule "a pariquadrato" seems to find expression, seeing that the ratio he employs is the most practical of all, and the one which least truly approximates to the ideal proportions of the double triangle, though in buildings of lesser size it would be near enough to exemplify that principle. This is the ratio of Four in breadth to Seven in length. This we will call the "Masons' Convention."

The English Perpendicular, in which William of Wykeham worked, was in some respects a reversion to practical principles, though it must not be assumed that the scheme of symbolic representation by number and proportion, into which Durandus gives us a guarded insight, was superseded by the later builders altogether. It probably tended with time to become over-elaborate, and for that very reason a reaction would sooner or later be inevitable, by which processes of simplification would assert themselves.

To find the geometrical principle in its more perfect expression an examination must be made of the works of the best period, that is to say, the time when architectural achievement had reached its highest point and decadence had not set in. This would be the twelfth century and the early thirteenth century of English work. And reference should be made to examples of the most careful character and least altered by subsequent builders.

It has been the writer's good fortune to discover an almost perfect example of such a principle in the Lady Chapel of Glastonbury Abbey, a structure whose history would be all in favour of a perfect symbolic expression, since the extreme and scrupulous care used by its builders in designing it on ancient lines is on record. Kerrich alludes to this building and gives diagrams and dimensions, but he was not accurately informed as to its true proportions, which have only been recoverable by careful measurement owing to the violence to which the building has been subjected and its consequent partial collapse in width at one end. A plan of this chapel is given, from which it will be seen that the figure of the Vesica is present in a form so nearly accurate as to leave only the most insignificant margin of error, and the figure is repeated in duplicate on the main axis.

THE GEOMETRIC RATIO.

The true proportion of the double triangle is as 1 in breadth to the square root of 3 in length, or as 1 : 1.73205. A building 40 feet in breadth would thus have a proportionate length of 69.282 feet or, say, 69 feet 4 inches.

St. Mary's Chapel has a width, measured on the west face, of 40 feet 1 inch, but as some of the joints have opened it may be taken to have been intended originally for 40 feet. This is the measurement outside the plinth of the angle turrets. In the length there is another open joint to be allowed for, and for this we must deduct nearly an inch. The present measurement is 69 feet 7 inches, and with the corresponding deduction comes to 69 feet 6 inches. If the conventional 4 to 7 had been employed, it must have been about 6 inches longer.

But the inner measurement, which is the breadth between the buttress faces on centre of north and south walls, is computed to have been as nearly as possible 37 feet, and hardly even now deviates from that figure. The proportionate length brings us in this case to the face of the west wall at the level of the cill beneath the recessed wall-arcade, and this is the most natural point from which to calculate a dimension of length.

Although the corresponding line on the east wall is now missing, owing to the removal of the central section for the inclusion of the Galilee—which was done in the fourteenth century—the evidence of the original length of the chapel is attested clearly enough by the remaining data.

The superior accuracy of the inner Rhombus, which is, after all, the measurement of the actual framework of the walling, gives us a suggestion of another and closer approximation to truth than the "Masons' Convention" first described. This nearer approach is represented by the ratio 37 : 64.

Allusion may here be made to a remarkable fact noted constantly by the writer in his measurements of the various parts of the fabric of Glastonbury Abbey and that of the other foundations and walls

discovered. It is that the whole scheme of the Abbatial church and buildings appears to be planned upon a series of commensurate squares of 37 feet, or more accurately speaking, of twice 37, that is, 74 feet. The west wall of St. Mary's Chapel marks the western limit of this great series of squares, which are figured in a plan contributed to the *Somerset Archaeological Society's Proceedings* for 1913. The reason for the choice of this number of feet (or inches) as the unit of general measurement is still under investigation and will take some time to determine, as it is by no means clear that some second standard of measure, different to the English foot or yard, was not employed, such as the ell of 37 inches, which was used at Gloucester as a land measure, and may have been used also by the Glastonbury builders.

But this is a digression from the main issue. We have now two approximations to a geometric rule: one rough, but extremely simple and convenient (4 : 7), capable of lending itself to the making of handy builders' measuring rods, and the second a finer adjustment but inferior in convenience, since 37 inches is a long scale, and a relatively clumsy one to deal with,* the compensating feature in this case being that the longer proportional 64 is capable of sub-division by repeated bisection to an extent which would surely have commended itself to the practical mason.

OTHER APPROXIMATIONS.

We may now enquire what other fractions will yield us good conventional working elements for the setting out of buildings to the rhombic proportion? In what other manner could the architects of the former time have divided their measuring rods so as to secure the desired result without undue difficulty or inconvenience? There are several fractions giving a near approximation to truth, but only one or two which could be called convenient. The best of these is the ratio 26 to 15, which is alluded to in a work which will be found in the R.I.B.A. Library, entitled *The Canon—An Exposition of the Pagan Mystery perpetuated in the Cabala as the Rule of all the Arts* (London: Elkin Mathews, 1897). This work, being very mystical and ill-arranged, is not freely consulted, but it is evident that the author was well read in his subject and has been most painstaking in his collection of evidence on such points as connect the ancient rules of building with geometrical symbolism. We gather from his pages that he considers that the ratio 26 : 15 was well known and of high repute among the ancients in some such connection as the tradition inherited by the mediæval builders from remoter antiquity would point out. The Louvre Cubit of 28 digits, unequally divided as 13 : 15, might suggest a practical application of this principle.

We have yet, however, to find proof of the use of these proportionals either in the known history of our buikling measures or as evidenced in the masonry of our own schools of builders. But this may well be due, as regards the last-mentioned, to a want of definiteness in research. It is a point which would clearly have easily eluded any investigation not based upon the *a priori* conception of the existence and use of such a proportional. In this respect it is hoped that the present essay may stimulate research.

But another and very fair adjustment of scales to integral number in inches offering a near approach to the rhombic ratio is that of 11 to 19—with its complementary ratio 19 to 33. Take 33 inches as your "yard," and the cross measure 19 inches, which we may describe as a "cubit," and you have a very workable pair of measures, since 19 inches is $18 + 1$, and 11 inches is $12 - 1$. We do not say that there is any warrant for the assumption that such a pair of measures was actually in use, but in all these cases it is well to remember that the masons were undoubtedly in the constant habit of halving, doubling, or otherwise devising simple and compound fractions of their normal standards, and indeed, our own foot of 12 inches is a case in point, seeing that it is one-third of the real standard, that is to say, of the yard. And in this connection it is sufficiently clear that a cubit was often employed which was $1\frac{1}{2}$ feet in length, or half a yard, whilst there is also evidence of an 11-inch foot.†

* In the Gloucester records it is viewed as a yard-and-an-inch, or thumb, and spoken of as "*virga cum pollice interposito*."

† The ratio $2 \times 19 : 3 \times 11$ (38 : 33) also subsists in our land measures as it is the ratio of the nautical mile to the statute mile (2026·67 yards : 1,760 yards).

THE GEOMETRIC CUBIT.

The title chosen for this Paper must now be justified. We are dealing with a proportional which, as already shown, bears to the 12-inch foot the approximate relation of $\sqrt{3} : 1$. Theoretically it is the Mean Proportional between the foot and the yard, but in practice it could not be so if any arithmetical convention were used for harmonising it with the other standards, since any artificial adjustment, if it increased the difference between the foot and the geometric mean, must correspondingly decrease that which lies between this mean measure and the yard, and *vice versa*. In this case the proportionals would appear as :

Foot	Cubit	Yard
4	7	12

Hence greater accuracy would be desirable. There is a triplet of measures to be kept in reasonable harmony. Our yard and foot are ancient measures—so ancient, indeed, that the mere statement of their probable antiquity is apt to excite scepticism. But the fact remains that they are in close geometrical relation with the principal measure employed by the builders of antiquity—i.e., the cubit of 7 palms; and if this geometrical relation be admitted, then they may be claimed to have been in all probability the original standard from which that cubit was derived, seeing that they do, as a matter of fact, happen to be in the strictest sense of the word geometrical measures—that is to say, measures of the earth's axis. For it has been stated on good authority that our inch, the unit on which the foot and yard are based, represents within a close approximation a fraction of $\frac{1}{200,000,000}$ part of the earth's axial length. Sir J. Herschel, in a letter to the *Times* dated 30th April 1869, says that the inch appears to have deviated from geometric accuracy by the loss of just $\frac{1}{1000}$ of its length. Sir C. Warren, however, in his work on the *Ancient Cubit* seems to regard even this as an over-estimate. In any case the loss is so minute as to be negligible in practice, and the amazing fact is that the standard, if originally derived from the earth's measure, should have been so well maintained. The cubit, which is the mean between our foot and yard, is strictly 20.7846 inches, and is the side of a square whose area is 432 square inches, equivalent to an area of 24 inches \times 18 inches.

The prime object of the use of the Mean Proportional in measures would appear to be to provide a Standard of Area, of square form, from which other spaces of equivalent area might readily be derived. There is evidence of the highest antiquity for the practice of obtaining equal areas with diverse proportionals. It is found in the ancient Indian "Shilpashastras," or rules of religious art; and Professor Petrie notes such a custom as controlling methods of the Egyptian builders.* In the King's Chamber of the Great Pyramid are recorded, in linear measure, the roots of the simpler arithmetical values, such as are employed for this purpose. These roots would appear to have been among the more guarded traditions of the ancient builders. In the case of the mediæval workers, however, there does not at present appear sufficient evidence that their object was the equalising of areas of floor or wall space, but it is more likely that the practice of employing these proportionals had become so interwoven with their traditions, and so hallowed by time and religious association, that it had taken on a purely symbolic implication. This would be pre-eminently so in regard to the use of the triangular proportions, as the history of the Vesica shows plainly enough.

But, more than this, it must always be borne in mind that a practice of this sort may be grafted on original necessities of the craft, and that the mason, in order to set out his square and perpendicular lines, must necessarily have made use of the equilateral triangle on each side of his base line of standard length, and would thus obtain a third measure which would be the geometric mean between his two principal units of linear measure.

The triangular ratio does not appear definitely in Egyptian monuments, which rather follow the laws of the numbers 2 and 5 and their roots—the proportions of the side of the square to its diagonal and of the right-angled triangle whose sides are as 2 : 1, and the hypotenuse consequently $\sqrt{5}$, since

* *Pyramids and Temples of Gizeh*, pp. 194, 199, 200, 220, and p. 181 ref.

$2^2+1=5$, the square on the same. Nevertheless, in Egypt appears in later times a well-marked triplicity of measure, similar to our own, the extreme proportionals being in their case the Mahi, or Nile cubit of 20.76 inches (or thereabouts) and its triple, the Xylon, or staff-measure; whilst their unrecorded mean would be as nearly as possible our yard of 36 inches. The tripling of measures had, without doubt, a religious—probably a Trinitarian—significance, and in the choice of the two leading units we may recall the proportions of the first Hebrew Temple, with its single and double square areas, the Holy of Holies and the Holy Place—together, three squares in length. It would be well if, in the case of some of our own unspoilt Early churches, a careful measurement of the floor areas of the nave and quire (often square) could be made, with the object of testing the principle involved, by finding the side of a true square of the same total area.

To revert to our own units of length. A witty Frenchman once said, "If God did not exist, we should have to invent Him," and the writer would be disposed to make a similar observation with regard to our Inch, that, if it did not exist, we should have to discover it—in order to explain the measures of the ancient world, to reconcile their apparent incompatibilities, and introduce any coherence amongst them. For truly our measures would appear the only possible nucleus of a stable system to which these others could be linked, unless we are to be content with a merely physical—i.e. corporal—origin for all. Such human measures are well known and admitted, but their use argues a perpetual variability, and does not logically exclude the geometrical theory, any more than the counting of fives and tens on the fingers excludes a quite distinct geometrical basis for the denary system of notation. (This geometrical foundation can be shown and is of the greatest interest.) Some measures are strictly geometric (in the sense of terrestrial measure). Others are in mathematical relation with these (as the cubit of seven palms). Many are ascertained to have a counterpart in the measures of the human frame. The two systems co-exist, blend, and harmonise. But we must make our choice as to those which we deem original, and those which we think derived. In the writer's view the most reasonable working hypothesis is that the Inch, Foot, and Yard are the original series, and the Cubit, a measure of acknowledged variability, the secondary or derived one.

The argument from antiquity is fortified by the facts in the following table, which shows the units required for setting out areas equivalent to that of a given square, with sides proportioned as 2 : 1, 3 : 1, and 5 : 4.

- (1) Assumed Original Unit, on the primitive sexagesimal system :

	Sides.
$36'' \times 36'' = 1296$ square inches	$36'' = 1$ yard.

- (2) First derivative (for a double square) :

$$(36 \times \sqrt{2}) : (36 \times \frac{1}{\sqrt{2}}) - \text{unit}, 36 \times \frac{1}{\sqrt{2}} = 25''.45 \quad (\text{Cf. Royal Cubit of Persia, Chaldea, and Judah.})$$

- (3) Second derivative (for a triple square) :

$$(36 \times \sqrt{3}) : (36 \times \frac{1}{\sqrt{3}}) - \text{unit}, 36 \times \frac{1}{\sqrt{3}} = 20''.78 = \text{Egyptian Royal Cubit.}$$

- (4) Third derivative (for a rectangle proportioned as 5 : 4) :

$$(36 \times \frac{\sqrt{5}}{2}) : (36 \times \frac{2}{\sqrt{5}}) - \text{unit}, 36 \times \frac{\sqrt{5}}{2} = 40''.248 = \text{Egyptian Metric Yard (early form).}$$

These results err but very slightly on the side of excess, the average in each case being a trifle lower in the case of known examples, but, being geometrical, are liable to modification to suit any arithmetical adjustment of scales desired.

How small, comparatively, are the differences between them and actually discovered units will be seen by the following table :—

(1) Yard.	(2) Chaldean Cubit.	(3) Egyptian Cubit.	(4) Old Metre.
36" Eng.	25.45 Geometric.	20.78 Geometric.	40".248 Geometric.
36" Gt. Pyramid (Great Step)	25.38 Maximum found	20.76 Nilometer	40".23 Egyptian
(Practically alike)	00.07 defect.	00.02 defect.	00.018 defect. or 00.009 on the half metre.

The Egyptian Royal Cubit was of seven palms, each measuring from about 2".91 to 2".95 according to the size of the digit (.727 to .737). The "Pyramid" palm yields a digit approaching the latter.

40 digits of .735—or 12 palms=29".4, again a derivative of the yard, since $36 \times \frac{\sqrt{6}}{3} = 29".40$.

The division of the Royal Cubit into seven palms seems good evidence of the presence of the seven as a proportional, either as 5 : 7 : 10, or (more probably) as 4 : 7 : 12. The cubits vary from about 20".5 to 21". Seven-fourths of 12" is 21", and twelve-sevenths of 12" is 20".57, which is nearly the Louvre Cubit.

The Cubit of 20.63, found by Professor Petrie in the King's Chamber, seems to be the most representative cubit of this order. These 28-digit cubits are Royal, or Temple, Cubits. The Common cubit is of six palms.* The European cubit seems to accord very nearly with the latter, and become readily identified with the half-yard of 18". The Seven stands out prominently as a proportional both in ancient and mediæval usage. With the Egyptians it appears to have ruled the relation of square and diagonal, since the side of a square is very nearly as 5 : 7, or as 7 : 10 of its diagonal.

We can express this ratio as 5 : 7 : 10

or as 7 : 10 : 14

12 : 17 : 24

and the sum of the two sets of proportionals gives us the better adjustment (12 : 17) found in Roman work.

To summarise our conclusions—in the old and mediæval systems of measure we can discern at least three main standards :

- (1) The Yard, with a *senary* division representing the old sexagesimal system.
- (2) The Metre, representing the $\sqrt{5}$ and $\sqrt{2}$ derivatives, with a *decimal* division.
- (3) The Cubit, representing the $\sqrt{3}$ derivatives, with the proportionals 4 : 7 : 12, and a consequent division into 28 (4×7), or into 84 (7×12).

Of these the first is the overt measure in English work, the 21" cubit being a latent proportional. In Egypt the cubit is the overt measure, and the yard is implicit only, or scarcely to be detected in the monuments. The second, the old metre, is common to both systems, and though abolished by statute in this country since 1439, is still well represented by our *decimal* system of land measure, where the unit is 3".96 (+.06), giving us the Fathom of 79".2— $\frac{1}{8}$ of a yard. Were our Metric Yard still in use, it may be that our debt to Egypt in the matter of measures would more readily have been recognised.

* Usually about 18".24. It unites in square measure with the cubit of 20.63, forming a rectangle of 376 square inches, equivalent in area to one square Euboic cubit, and almost precisely $\frac{7}{12}$ ths of the area of one square Royal Cubit of 25.38 (=644 sq. ins.). With the square "Remen," which is $\frac{4}{12}$ ths of the same area, we have again the triplicity 4 : 7 : 12, this time in surface measure.

CHARING CROSS BRIDGE BILL.

The South Eastern Railway Company's proposal to construct a series of steel cantilevers of arched form under the down stream portion of the existing bridge may or may not be necessary to secure the maximum use of the bridge. It is evident, however, that any such work will in all probability defer indefinitely the proposal for the much needed road bridge across the river at this point, a proposal which has been continuously urged by leading Londoners for some years. It is evident also that any such work cannot be carried out, or even commenced, during the war, so that it was an eminently reasonable proposal that was put forward by the Institute and the London Society that the proposed works should be postponed until, say, two years after the war, to allow time for the full and proper consideration of the whole subject, especially as to the needs of the road traffic from the West End to and from Waterloo Station, and the possibilities for the construction of a fine new bridge.

That the views of the Institute and the London Society met with wide and influential support is evident from the fact that the House of Lords itself passed an instruction to the Committee considering the Railway Company's Bill,* "to take into consideration the requirements of the traffic over the river at Charing Cross and the effect which the Bill will have upon them, and to hear evidence from the Royal Institute of British Architects, the London Society, and others on the treatment generally of this very important part of London." Such an instruction to a Parliamentary Committee is almost unprecedented, and in itself is a testimony both to the importance of the subject and to the recognised standing of the Institute.

The Bill came before the House of Lords Committee on the 19th May, and during the four days of its consideration by the Committee it was evident that there was general agreement, even on the part of the Railway Company itself, that the present unsightly bridge is an eyesore which all would be glad to see removed, and that a fine new road bridge would be a very desirable thing.

The Marquis of Bristol, as chairman of the Parliamentary Committee, said "we should all like to see it," and there is no doubt as to the sincerity of the statement.

Mr. Clode, K.C., and Mr. Scholefield were counsel for the Railway Company, and Mr. Honoratus Lloyd was retained for the Port of London Authority.

The case for the promoters was that the strengthening proposed was to enable full use to be made of the bridge. Owing to the increasing weight of the modern locomotive, the railway company had been obliged to put a restriction on the use of the older portion of the bridge, so that of four tracks available not more than two tracks, and these not adjacent, could be used at one time, for any except stationary trains. It was

contended by the Company that the proposed expenditure of some £167,000 was in the nature of a "temporary" strengthening, and the implication was that any such expenditure would not interfere substantially with the larger scheme that might be necessary later on.

There was considerable opposition to the proposed arched cantilevers from the Wandsworth Gas Company, which owns several large steam colliers, and the contention was advanced that navigation would be rendered difficult, owing to the curve of the river at Charing Cross; but this point did not appear to carry weight with the Committee.

The opposition on behalf of the Royal Institute and the London Society was represented by Mr. Vesey Knox, K.C., who had with him Mr. R. Glen. Mr. Freeman, K.C., appeared for the London County Council. Most valuable evidence was given by Mr. John Burns, M.P., and Sir William Lever, on behalf of the Institute's suggestion for a comprehensive scheme, and the point was strongly brought out that, apart from Parliament itself, there is no body or authority with the requisite powers to consider and weigh up the merits or demerits of such proposals as this, and if necessary veto them in the public interest.

The London County Council and the Port of London Authority have given considerable attention to the question of Thames bridges, but neither authority has plenary powers even in this respect: hence it is all-important that such bodies as the Royal Institute and the London Society should keep a watchful eye on proposals of this kind until such time as a powerful public authority can be given control of the future of London.

Sir Aston Webb, R.A., gave evidence as Chairman of the London Society, the R.I.B.A. Town Planning Committee, and the Joint Committee of the two societies specially appointed to deal with Charing Cross Bridge. He said that the Institute was not committed to any particular scheme, whether for a high level bridge or a low level bridge, at Charing Cross, but strongly urged the necessity for full consideration being given to the whole matter, in the interests of London, before allowing the Railway Company to spend a large sum of money to perpetuate or give a further lease of life to the present unsatisfactory structure. He thought that after the war there would be here a grand opportunity for some Imperial memorial of the war. After the great war of 100 years ago, we had Waterloo Bridge—in itself a grand memorial of a grand struggle. The great period of reconstruction after the Napoleonic Wars gave us, in addition, Regent Street, built in 1819, and many similar architectural works, and there was every probability that the close of the present war would provide the same opportunities.

The Committee called as their own witness Sir Lionel Earle, Permanent Secretary of H.M. Office of Works, who expressed the opinion that, from the architectural point of view, the Railway Company's pro-

* See R.I.B.A. JOURNAL, pp. 173 and 189.

posal was a very objectionable one, and that a new Station on the south side was desirable.

Mr. Andrew Taylor [F.], Chairman of the Improvements Committee of the London County Council, in giving evidence on behalf of the London County Council in support of the request for postponement of the Railway Company's proposal, said he thought that if the matter could be postponed as suggested, the London County Council would certainly take into consideration the question of the construction of a road bridge at Charing Cross, and he had every confidence that the various authorities concerned could be brought into agreement on the matter.

Professor Beresford Pite [F.] and Mr. Paul Waterhouse [F.] were also to have given evidence, and it is regrettable that the Parliamentary Committee did not see their way to hear their evidence, which could have brought out some valuable additional points on the traffic side of the question.

Mr. Leonard Stokes [F.] and Mr. Howley Sim [A.] were also present as members of the Westminster City Council, in support of the Institute's point of view.

The present position is that, although the House of Lords Committee have found the preamble of the Bill proved, a clause has been inserted that the works are not to be commenced without the consent of H.M. Treasury, until a period of one year after the war, so that, although the time for consideration is limited, there is still room for the formulation of a comprehensive proposal for this part of the river, and we note with satisfaction, from Mr. Andrew Taylor's statement on behalf of the London County Council, that the matter will not be neglected.

The thanks of the Institute and of the London Society are due to the Joint Committee of the two bodies presided over by Sir Aston Webb, R.A., which has not only given an immense amount of time and trouble to the consideration of the question and formulating the evidence, but has itself undertaken the financial responsibility of securing that the two Societies should be represented by counsel before the House of Lords Committee.

W. R. DAVIDGE [A.],
Hon. Secretary, Joint Committee
opposing Charing Cross Bridge Bill.

GEORGE THOMAS HINE [F.].

A MEDICAL APPRECIATION.

To the widespread regret which in many circles the death of Mr. G. T. Hine has caused, it is a privilege to be allowed to add, even though imperfectly, some expression of the high estimation in which he was held by the medical profession, and in particular by that branch of it which is concerned with the study and treatment of mental diseases.

The first link in the long chain of successes which ultimately so closely connected Mr. Hine with psychiatry was forged when in 1875 he—to use his

own words—"made his *début* as an asylum architect" by designing the new asylum then about to be erected for his native town, Nottingham; and it is worthy of note that even in this, his first step in asylum planning, his dislike of any tendency to stereotypy in design may be observed; for in that asylum, now 36 years old, is to be found one of the earliest examples of wards specially planned for the safe accommodation of epileptics, whose segregation is a distinct advantage as well to other patients in an asylum as to themselves.

It would be outside the scope of these remarks to detail even the more prominent features of all the many new and important public asylums which he designed and completed; but, in making reference to some of them, what is desired especially to emphasise is the close watch he kept on the progress of medical thought as it affected that branch of medicine with which he was so intimately identified: nor was he content merely to maintain this watch, for, as manifested by his published writings, he was a wide reader of the history of the treatment of the insane, and thereby laid the best of all foundations on which to work when giving expression to medical aspirations in the exercise of his professional art.

Of all residential institutions, the modern asylum or hospital for the insane probably requires the maximum amount of detail, in the provision both of adequate opportunity to classify the patients and of special arrangements for their safety. During the period when it was thought desirable that all these facilities should be provided under one roof, Mr. Hine's acknowledged and consummate skill, especially in meeting all these requirements in a convenient compass, is perhaps best seen in the Claybury Asylum for the County of London, which was completed in 1893, and was the first asylum in this country planned *ab initio* for over 2,000 patients. Nor was this skill visible only in original designs, for his advice was in frequent request in remodelling portions of old asylums, either for purposes of enlargement or to meet modern requirements—a task perhaps sometimes demanding even greater resourcefulness than the conception of an original design.

Coincidentally with the completion of the asylum just named, the merits of the "villa system" of asylums construction, as illustrated in America and on the Continent, were being advocated in this country. They were tentatively exemplified at Bexley Asylum, opened in 1898 for 2,000 patients, in the original design of which Mr. Hine included three detached and unfenced villas—two for chronic working patients capable of being given a considerable amount of parole, and one as a hospital either for tubercular cases or others requiring isolated treatment. The history of the third of these villas is interesting; for it was opened, and still continues, as the "admission hospital" for the female side of the asylum, and is the first example in the public asylums of this country of the use of an entirely detached and unfenced structure small enough to pro-

vide only for the reception and early treatment of newly admitted cases. Bexley is also interesting as being one of the first asylums, if not the first, in which, as regards the main building, supervision and administration are much facilitated by the fact that all the wards, besides each having its own access from the main corridor, communicate with one another, so that an officer may pay a complete round of either the male or female side without retracing his steps or being obliged to return to the corridor. Meanwhile Mr. Hine was engaged in planning the new East Sussex Asylum, opened in 1903 for 1,100 patients, the main building of which is remarkable for the admirable subdivision of the wards for acute cases and for the ingenious arrangement giving alternative access from the male or female side to two of the male infirmary wards, thus rendering the employment, if desired, of the female staff in the latter administratively very easy. Allusion is, however, made to this asylum mainly with a view to pointing out that, in its scheme, the partial adoption of the villa system received a notable extension, and included a detached building specially designed to serve as an "admission hospital" for the reception and early treatment of all new cases in complete dissociation from cases of chronic insanity. The design of the Long-Grove Asylum, opened in 1907 for the County of London, contained separate admission hospitals—one for each sex, and, besides several other villas, two small detached buildings to serve as "half-way homes" for convalescent cases; thus recognising the important desideratum that, in a modern asylum, a person suffering from a curable mental illness may find treatment in the best of surroundings and on modern lines without ever once having been in contact with the more unpleasant types of chronic insanity. This asylum is of interest also as regards its main building, in which covered ways and corridors entirely open on one side take the place of the usual type of closed corridor. In the new asylums for Hampshire and Swansea—commenced, but which Mr. Hine has not lived to see finished—several new and important features have been introduced; but enough has been said here to illustrate the true spirit of progress which characterised all his undertakings.

In 1897 the Commissioners in Lunacy—now the Board of Control—appointed Mr. Hine as their Consulting Architect, in which capacity his services were greatly valued and appreciated.

Further recognition was given to Mr. Hine's work, and more particularly to his keen insight and interest in its medical aspect, by his election in 1898 as an Honorary Member of the Medico-Psychological Association of Great Britain and Ireland—a distinction but sparingly bestowed even upon medical men, and which had only thrice previously been conferred on anyone outside the medical profession.

Though possessed of firm convictions and a strong will, courtesy and an endearing modesty as to his own attainments were never absent from his manner to-

wards those with whom his work brought him in contact. To medical men engaged in asylum practice he willingly paid the compliment of advising every aspirant in asylum planning "to humble himself and sit at the feet of his Gamaliel, the asylum doctor." To the opinions of the latter he was ever ready to listen, and when convinced of the value of a suggestion no amount of extra time or trouble to incorporate it in a design did he grudge. "So double was his paines so double be his praise."

C. HUBERT BOND,
Commissioner of the Board of Control.

George Thomas Hine, late Consulting Architect to H.M. Commissioners in Lunacy, who died on the 25th April in his seventy-fifth year, had been a Fellow of the Institute since 1877, and as President of the Nottingham Architectural Association he served on the R.I.B.A. Council in 1888-89.

Born in Nottingham in 1841, he was the eldest son of the late Thomas Chambers Hine, F.S.A., an architect in a large way of practice in Nottingham and agent for the Nottingham Park Estate to three succeeding Dukes of Newcastle. He was first educated at a private school, and completed his education in Paris. In 1858 he was articled to his father, and remained with him until 1864, when, owing to a serious impediment in his speech, he left England and spent three years sheep-farming in Australia. At the request of his father he returned to England in 1867, and having partly overcome his infirmity of speech, he accepted the partnership offered him by his father and devoted himself assiduously to his profession.

In the early years of the partnership he assisted his father in laying out and developing the Nottingham estates of the Duke of Newcastle, particularly that of the Park, where they designed and superintended the erection of nearly a hundred houses, ranging in cost from £1,000 to £10,000. He was associated with his father in restoring the old Nottingham Castle and adapting it to the purposes of a Museum of Art in connection with the South Kensington Museum; also in the erection of the Nottingham County Assize Courts, and numerous churches, private residences, and warehouses in and about Nottingham, including the beautiful little chapel at Clumber House which the present Duke of Newcastle on his accession to the property pulled down to make room for a new church on a larger and more magnificent scale.

There was one work, however, during this period for which the junior partner was alone responsible, and the successful accomplishment of which brought him prominently to the front in connection with the special branch of architecture with which his name is identified. His father rarely took part in public competitions, but he encouraged his son to try his hand in the competition for a new Lunatic Asylum for the Borough of Nottingham. There were numerous competitors, and Mr. Hine's design was adjudged the best and was approved by the Lunacy Commissioners. The buildings, costing £35,000, were carried out to completion under his superintendence. The asylum was notable as containing one of the earliest special wards for epileptics.

The Nottingham Asylum was the forerunner of many such commissions. In 1886 Mr. Hine was invited by the Middlesex Justices to take part in a competition limited to six architects for the new Asylum at Claybury. Again the award was in his favour, and the building, remarkable on account of its size and type of plan, was commenced in 1887

and completed in 1893. In designing this building the problem which confronted the architect was to accommodate the two thousand patients within reasonable distance of the administrative centre without prejudice to the position and aspect of the wards. The plan he adopted was a modification of the echelon type, the wards being approached from obtusely oblique corridors, the pavilion system being almost a necessity from the conditions issued. The asylum is built on the top of a hill, falling all ways, and by removing the apex of the mound, representing nearly one hundred thousand yards of soil, a level plateau was obtained, sufficient to allow of about half the patients' blocks and the whole of the administrative department being erected at one uniform level, the remaining wards being slightly lower, though in no case more than five feet below the central buildings. The hundred thousand yards of soil were well disposed of in filling up a valley to the north of the Asylum. As Consulting Architect to the Lunacy Commissioners Mr. Hine always strongly urged architects designing asylums to give a first consideration to the site. In many of the plans which came under his official notice he complained that the buildings were generally left to adapt themselves to the site rather than the site being first adapted to the buildings. What, he asked, was the small additional capital charge compared with the perpetual inconvenience and extra cost of working a building, filled with feeble, irresponsible patients, which has numerous steps on the ground floor, up and down which food trolleys as well as patients have to be conveyed.

While the Claybury work was in progress Mr. Hine removed to London and established himself as a specialist in Asylum architecture. He was extraordinarily successful in competitions. During the short space of seven years he took part in no fewer than twelve competitions for asylums and other important buildings, and was awarded first place in seven, and second in the remaining five.

On the retirement of Mr. Howell, Mr. Hine was appointed Consulting Architect to H.M. Commissioners in Lunacy for England, a post which he held for some twenty years, during which time he voluntarily relinquished competition work. He was also Consulting Architect to the Edinburgh District Asylums Board, and for the large Asylum at Purdysburn for the Belfast district. Besides the Claybury Asylum he designed and completed for the London County Council the Asylums at Long Grove, Horton, and Bexley, at a cost of about a third of a million each. Other buildings of the same class designed and carried out by him include the County and Borough Asylums of East Sussex, Worcestershire, Sunderland, Hertfordshire, Kesteven, Surrey, Gateshead, Hampshire, Swansea and Merthyr. He was architect of substantial additions to the Asylums at Dorchester, Leicester, Nottingham, Moulshof, Wells, Cotford, St. Albans, Devizes, &c. His work everywhere received grateful recognition, and he was held in high honour by the doctors who practised in these institutions. He raised enormously the standard of asylum construction in this country, and from the humanitarian aspect undoubtedly proved himself to be a benefactor to the unfortunate victims of insanity for whose health and comfort he was always scheming. In 1901 he gave the profession the benefit of his ripe experience in a Paper on Asylums and Asylum Planning read before the Institute, and published, with a number of folding plans, in the JOURNAL for the 23rd February 1901. This Paper is still recognised as the standard publication on the subject. He contributed also several Papers on Asylum Construction to the Congress of

Hygiene. In 1909 he took into partnership Mr. H. Carter Pegg [F.], who had been associated with him for over thirty years.

Mr. Hine was a Fellow of the Surveyors' Institution, an Hon. Member of the Medico-Psychological Association, and Past Master of the Royal Sussex Lodge No. 402 of Freemasons. He was a member of the Union, St. Stephen's, and Ranelagh Clubs, and one of the original six members who formed the Robin Hood Rifles (Notts). In 1870 he married Florence Deane, youngest daughter of the late Mr. Edmund Cooper, of Failand House, Somersetshire, who survives him. He leaves a son—Dr. T. G. Macaulay Hine, Major, R.A.M.C., now engaged on bacteriological work for the Army—and a married daughter, Mrs. Sidney Coxon, better known to the novel-reading public under her maiden name of "Muriel Hine."

Mr. Hine found his principal recreations in riding and shooting, in his earlier days being a keen follower of the South Notts hounds, and even up to a few years of his death he would ride down to his office in the mornings after a canter in the park. A great reader and a lover of art he was above all things an indefatigable worker. He died "in harness," as he himself desired, keen-witted and capable to the last, beloved by all who had come in contact with his genial, vivid, and sympathetic personality.

TOWN PLANNING.

PRÉCIS OF MR. LANCHESTER'S MADRAS LECTURES.—III.

(Continued from p. 225.)

The subject of the fourth lecture was "Historical Study of Town-Planning," and was illustrated by numerous plans of Egyptian, Greek, and Roman cities.

In the existing world, said the lecturer, is to be seen almost every stage of civic development. The primitive village gives some idea of the pre-historic town. The earliest types of building are usually circular. These do not offer a marked suggestion as to the lines of the town. As long as there was access to each house, that sufficed. Rectangular building naturally soon led to rectangular plan, and we consequently find this developing at an early stage of the more civilised peoples. Then the community demanded some central focus, either religious, commercial, or administrative: the Temple, the Agora, the forum or market place; the Palace or City Hall—sometimes these combined, sometimes grouped, sometimes separate. In the older civilisations, the tendency of the house was to become subordinated to definitely communal buildings. As far as we know, the Roman sense of law and discipline led them to introduce into the city that symmetry of plan that the Egyptians had developed in their temples. Their cities were influenced by the scheme of their military camp. In the disorganisation that followed the downfall of Rome, a few cities retained, to some extent, their original plan, but others almost vanished, to arise again in the haphazard lines grouped irregularly around the traffic routes which took the easiest line, regardless of symmetry. Cities deliberately planned were an exception.

At first the cities were more of the village type, and subsequent congestion was due to defensive walls. The charm of the mediæval city was due to the keen interest people had taken in the beauty of the buildings and their adaptation to the peculiarly varied conditions of site. It was left to the

Renaissance to take up the axial traditions of Roman planning, and, with a sense of form less pure than the Greek but far more developed than that of Rome, attempts were made to remodel, extend, and build cities in which the formality of the buildings was duly supported by an appropriate formality of lay-out. With the Renaissance came the expression of personal imaginings, the artist designing the city as the sculptor or the painter looking on his stone or his canvas. The Fontana at Rome was made the prototype of the Haussmann plans for Paris, with their predominant factor the vista. These individualists were influenced by many suggestions, such as the summit temples of Greece, the symmetrical regularity of Rome, the radial avenues and circular intersections of the hunting forest, as will be seen from their plans, but rarely by economic or social considerations—or, rather, the only social influences to which they were subject were those of the ruling princes and nobles. None the less, some sound and rational work was done, and much of it is still appropriate to the needs of our own time. Its weak point was the accommodation for the working people—these had been huddled together in Roman and mediæval cities, and the Renaissance brought little advance to them. Improved streets and open spaces helped somewhat, and building became more substantial, but in other respects their housing conditions were much the same.

The fifth lecture turned on "Tradition and City Development." The lecturer pointed out that the value of a city's traditions is measurable by the value of the part it has taken in the history of human development. In appraising this value we must beware of taking too narrow a view, of forming our opinions too closely on the ideals of the moment. Such ideals are perpetually re-constituting themselves, forming new combinations, by the advance and retirement of their leading components, as in a complex dance movement. We have, and rightly, the feeling that we ourselves have something to say in the development of the city, that with the recognition of a higher sense of communal life must come a more consistent and more definite manner for its expression, but let us not, on the other hand, condemn without the most careful consideration the efforts that are perhaps a little too near our own time to have acquired the dignity of age.

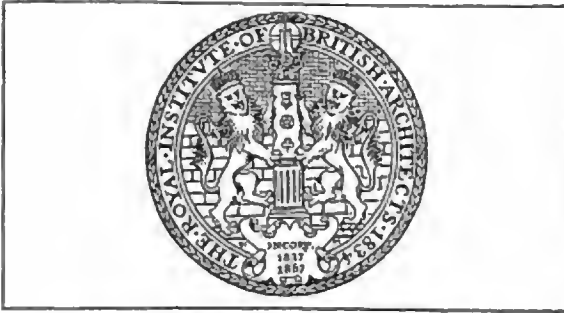
One of our chief difficulties lies in the fact that transportation facilities have changed the natural building materials in many districts. We cannot afford to disregard the economic aspect of building; in most cases we are pledged to give the maximum convenience within our means, using brick where we should formerly have employed stone, and other substitutes of a like character. As each material demands appropriate treatment, this adds a further difficulty to the task of harmonising the old with the new, yet with study and care a great deal can be done in the way of harmonising the general forms and colour schemes, even where different materials have to be used. Any attempt widely departing from local traditions is unlikely to be satisfactory, but the art of civic development comprises many other things besides the buildings. There is the framing up, as it were, and here we have again the task of reconciling new requirements with old, in a more accentuated form, probably, than in the case of structures themselves. As the result of this modification in our demands, the extensions to our cities usually assume a more rural aspect than anyone would have regarded as possible some years ago.

The usual manner in which we comprehend the character

of a large town is by a succession of impressions as we pass from one point to another. Normally we receive these impressions during our approach to or departure from some point near the centre; in the first case there would be a gradual transition from natural beauty to formal dignity, in the other the order would be reversed. We may reach a subsidiary centre with formal lay-out, and afterwards return to a looser and more open type of plan; but as we pass inward, each culminating point should transcend the preceding one, in respect of importance and dignity, while in the outward course the domination of natural beauty should become more marked at each intermediate point.

With the railways but little can be done, but there is much that we ought to take in hand in amending and beautifying our road approaches. Before the advent of the railways, a fine tradition had been established in respect to main roads, and it is for us to take up this tradition where it was dropped, and develop it on the basis of our own requirements. In so doing, a number of difficulties face us, the most serious being the linking up of our new developments with the older ones of the ante-railway period. There is another aspect of the problem. An important route demands a certain firmness of definition and formality. If we seek for the traditional method, we find lines of building continuing in well-proportioned masses on either side of the wide road. We have abandoned the use of blocks on this scale and demand that dwellings shall be spread out over a much larger area of land; our buildings are, therefore, relatively ineffective and are not to be relied on as an enhancement to the dignity of the thoroughfare. What can he substituted? We must have trees; a fine avenue (double rows on each side if possible) is almost as impressive and dignified as the massive terraces of former years, and the farther we go from the city centre the more appropriate these avenues become. They should not be quite continuous, as this would be somewhat monotonous in effect. Where justifiable, a group of buildings of suitable mass and scale should strike the eye, and the proximity of water or hills should be taken advantage of to provide variety of outlook. Other types of traditions to be considered are those of business, of employment, of worship, education, and recreation, all demanding appropriate expression in buildings and their environment. There are features whose preservation it has not been customary to regard as of essential value, such as the old fort and city walls: these have too often been destroyed, without sufficient reason, sometimes to the serious detriment of the city's appearance.

A movement is now beginning that must in many ways affect the general appearance of the Indian city. The more open lay-out; the increased proportion of detached buildings; the new requirements for administrative, educational and other purposes, involve of necessity a variation in type. Let it be your care, therefore, that no unnecessary divergencies tend still further to break up the harmony of effect, but by maintaining the general characteristics of form and design to secure as far as possible a continuity of manner, so that the old shall blend insensibly into the new. Our city is bound to be composed of a number of different kinds of building, expressing their differences, but they may be held together by the thread of tradition in architectural expression, much in the same way as the actual masses of these groups may be somewhat discordant in the variety of their intention, but can be unified by lines and masses of trees linking them together and disguising or softening their discordancies.



9 CONDUIT STREET, LONDON W., 10th June 1910.

CHRONICLE.

Lord Kitchener [H.F.] and Sir H. F. Donaldson [H.A.].

By the tragic event which has so profoundly moved the nation this week the Institute has lost one of the most eminent of its Honorary Fellows, together with a distinguished Honorary Associate, both of whom in the past had rendered useful personal service to the Institute. Lord Kitchener was elected Honorary Fellow in 1910; Sir Hay Frederick Donaldson, who perished with him, had been an Honorary Associate since 1896.

At the Town Planning Conference held at the Institute in 1910, Lord Kitchener, who was known to hold very enlightened views on the subject, kindly took the Chair at one of the meetings when a Paper on the Planning of Khartoum and Omdurman was read, and himself contributed an interesting address on the occasion. Through his exertions, after bringing the Khalifa's reign of terror to an end, the miserable, filthy, mud-built old town of Khartoum was transformed into a handsome, dignified, and salubrious city, with a thriving and contented population. Omdurman also he converted from an unhealthy "rabbit-warren" into a decent, orderly town. Lord Kitchener, it is said, had a passion for architecture, and had indulged it to good effect, notably at Simla, at Cairo, and on his own property at Broome Park.

Sir Hay Frederick Donaldson came into touch with the Institute in 1895, at the time of the Brickwork Tests carried out by the Science Standing Committee. He was at that time Chief Engineer of the London and India Docks Joint Committee, and was instrumental in procuring for the Institute the use of a vacant piece of ground on which to conduct the experiments. He took an active part in the investigations, and brought out some useful points in the discussion on the Science Committee's Report.

Architects and Military Service.

The arrangements made by the Royal Institute of British Architects and the Queen's Westminster Rifles for the enlistment of members desiring to serve together have unfortunately had to be cancelled, as the War Office has found it necessary to stop further recruiting for this Regiment.

Fresh arrangements have now been made with other regiments in which members of the Royal Institute and other architects will be welcomed if they will come forward without loss of time. Anyone desirous of taking advantage of these arrangements should apply at once to Lieutenant and Quartermaster H. G. James, 22nd Battalion (R.) King's Royal Rifles, Norfolk House, Laurence Pountney Hill, E.C., or to Captain Briggs, 23rd County of London Battalion (T.), 27 St. John's Hill, Clapham Junction.

Unattested men can enlist at once in either of these battalions; provided they are fit for general service and are up to the prescribed standards. Attested men should apply either to Captain Briggs or to Lieutenant James for a letter which will enable them to complete their attestation at their local recruiting centre and to be transferred to the battalion which they wish to join.

It has also to be announced that the 20th London Regiment (T.) has vacancies for some 500 men. If sufficient architects joined this regiment an "Architects' Company" would be formed and they would be kept together during training. Intending recruits should apply to Major Dodd, Holly Hedge House, Blackheath (telephone, Lee Green 962).

Lieut.-Colonel S. W. Cranfield [A.], commanding the 3/7th D.C.O. (Middlesex Regiment), states that he is prepared to take 50 or 60 architect recruits in his battalion. They must be medically fit for service abroad. Intending recruits should write to Headquarters, 3/7th D.C.O. (Middlesex Regiment), Solefields Camp, Sevenoaks, and they will receive a free railway warrant. On reporting they will be enlisted, and given leave to settle up their private affairs.

The R.I.B.A. Record of Honour: Thirtieth List.

Killed in Action.

HILLYER, WILLIAM HAROLD [Student], Captain, R.E.
Killed in action in France on 22nd May. Aged thirty-five.

Capt. Hillyer was the second son of the late W. J. Hillyer, of Blandford, Dorset, and of Mrs. Hillyer, of Lynceost, Shortlands, Kent. Educated at Timsbury, Eastbourne, and Dover College, he served his articles with Mr. S. Clifford Lee, of Moorgate Street, and studied at the Royal Academy Schools. He was assistant for a time in the Architects' Department of the London County Council, and was afterwards in Mr. Leonard Stokes's office, and later with Sir Aston Webb. He subsequently started on his own account, practising at 8 Buckingham Street, Adelphi, W.C. At the outbreak of war he enlisted in the Artists' Rifles, and in October, 1914, received his commission as Second Lieutenant in a London Field Company. He went to the Front in January, 1915, was wounded in May, 1915, and was mentioned in despatches in August. In October he was awarded the Military Cross for work done at Hill 60.

Wounded.

BAILY, BASIL EDGAR [F.], Major, 7th (Robin Hood) Bn. Sherwood Foresters. Severely wounded in Flanders. Making good recovery.

Major Baily writes that an operation he underwent a few days ago has proved a great relief. He hopes soon to be out of hospital, after which he goes to Roehampton to have an artificial hand fitted.

TOPHAM, GEOFFREY RONALD GILBERTSON [A.], 2nd Lieut., 18th Bn. London Regiment, seriously wounded by a shell at Vimy Ridge on 10th May. Progressing favourably.

Lieut. Topham joined the Artists' Rifles in August 1914; thence he obtained a commission and was transferred to the London Irish Rifles (18th Bn. London Regt.). He went to the Front on 8th July 1915 and has served with his battalion there ever since. His gazetted rank is still "2nd Lieut.," but he has been "acting" Captain since the battle of Loos in September last. He was for a few days in the Base Hospital at Le Tréport and is now in hospital in London.

Honours for Members on Service.

A Supplement to the *London Gazette* issued on the 2nd June has the following announcements:

The King has been graciously pleased to give directions for the following appointment to the Most Distinguished Order of St. Michael and St. George for services rendered in connection with military operations in the field:

HUBBACK, A. B. [F.], Lieut.-Colonel, 20th Bn. London Regiment (T.F.).

Lieut.-Col. Hnback, whose promotion to Brigadier-General has been announced, was elected Associate of the Institute in 1905 and Fellow in 1909. Before the War he was in the Public Works Department, Kuala Lumpur, Selangor, Federated Malay States.

The King has been pleased to approve of the under-mentioned reward for distinguished service in the field:

Distinguished Service Order.

BREWILL, A. W. [F.], Major and Hon. Lt.-Col. (temp. Lt.-Col.) Notts and Derby Regiment.

Military Cross.

CALVERT, C. H. [A.], temp. 2nd Lieut., Royal Artillery.

MOORE, H. F. [A.], Captain, R. Mon. Eng., S.R.

Croix de Guerre.

Mr. Banister F. Fletcher [F.] writes that his brother, Major H. Phillips Fletcher [F.], of the Middlesex Hussars, has returned to England on being seconded to the Royal Flying Corps. Attached to the French Navy as Commandant of the British Military Observers who were flying with French pilots in the East, Major Phillips Fletcher was awarded the Croix de Guerre in August last for reconnaissances under fire for the first time, and, before leaving the French Squadron, was decorated on two further occasions, once more for work with the Navy and once with the French Army. This entitles him to wear palm leaves and two stars on the riband of the Order. He is the only British officer thus decorated.

On Service with the Forces.

The following is the Thirtieth List of Members, Licentiates, and Students R.I.B.A. serving with the Forces, the total to date being 62 Fellows, 454 Associates, 254 Licentiates, and 277 Students:—

FELLOW.

Ough, Arthur H.: Lieut., Royal Defence Corps, No. 7 Observer Company.

ASSOCIATES.

Belfrage, J. H.: 36th Bn. Royal Fusiliers.

Braithwaite, J. E.: 3/5th West Yorkshire Regt.

Hepburn, J. W.: London Scottish.

Konyon, A. W.: 2nd Lieut. Kent (Fortress) R.E.

Musman, E. B.: A.S.C. (M.T.).

Nichols, Chas.: 2nd London Sanitary Co., R.A.M.C.

Pope, T. Campbell: 2nd Lieut. West Lancs. Divl. R.E.

Pursglove, Archd.: Royal Engineers.

Solomon, Henry: Royal Engineers (South Midland).

Tebbs, C. E.: Engineering Section, Artists' Rifles.

Tenoh, Edwin J.: Captain on Departmental Duties.

Wood, Douglas: R.N.V.R., A.A.C.

LICENTIATES.

Bryson, R. E.: 7th Middlesex Regt.

Edwards, J. P.: 26th Bn. Royal Fusiliers (Bankers).

Evans, J. M.: Welsh Field Co., R.E.

Jupp, C. K.: Smb.-Lieut. R.N.V.R.

Masters, W. A. H.: 2nd Lieut. for duty under Ministry of Munitions.

Overall, Percy G.: 11th Canadian Field Ambulance, C.E.F.

Prangnell, J. C.: Hants (T.) R.G.A.

Royds, A. F.: Capt., 1/28th County of London Regt. (Joined early in the War, and has been at the Front in France since June last year).

Scott, A. Colman: 28th Bn. King's Royal Rifles.

Walker, Fred.: Army Ordnance Corps.

Walker, J. C.: Major, Lancashire Fusiliers.

Wilson, H.: Major, 64th (H.) Divl. Train.

STUDENTS.

Keep, N. P.: Queen's Westminster Rifles.

Riddle, W. P.: Royal Engineers.

Vonberg, W. C.: London Rifle Brigade.

West, J. A.: London Electrical Engineers, R.E. (T.).

Promotions.

Aitken, A. Danskin [A.], to 2nd Lieut., 1st Lowland Field Co., R.E.

Clarke, J. M. [A.], to 2nd Lieut., 1st East Lancs. Regt.

Clemesha, F. Chapman [Licentiate], to Lieut., 46th Infantry Bn., Canadian Expeditionary Force.

The Rebuilding of Central Dublin.

The Times of 7th June published the following letter from the President:—

SIR,—It is to be hoped, notwithstanding the difficulties and distractions of the times, that the rebuilding of the Sackville Street district will be carefully considered. There is always a temptation to go along the line of least resistance and to rebuild a destroyed area in the quickest possible way in order to rehouse the inhabitants; but if careful thought and a little time are given to the problem now the result should be an ordered and considered scheme worthy of the City of Dublin and its fine architectural traditions.—Yours faithfully,

ERNEST NEWTON, President R.I.B.A.

The Council of the Royal Institute of the Architects of Ireland have adopted the following resolution:—

"His Majesty's Government having indicated its intention of taking steps to facilitate the restoration of the destroyed buildings in Dublin by proposing to assume, as the maximum of its grant, the same liability as would have fallen on the insurance companies had their policies covered loss arising out of the rebellion, the Council of the Royal Institute of the Architects of Ireland would urge on the Government the desirability, in making these *ex gratia* grants, of imposing conditions or restrictions with regard to the design and reconstruction of individual buildings in important thoroughfares such as Sackville Street, Eden Quay, Abbey Street, Earl Street, and Henry Street, so that they shall conform to some general scheme of street im-

provement. The Council would emphasise the necessity of imposing such restrictions inasmuch as the Municipal Council has no control over the design of new buildings other than as regards their street alignment, sanitary fitness, and the fulfilment of certain conditions in regard to construction. The Council would urge on the Government the advisability of attaching such conditions to these grants so as to ensure that public money should be expended in the interests of property owners and the enhancement of the architectural dignity of the city. To achieve this object the Council of the Institute would respectfully suggest that a Commission be appointed to control the conditions subject to which designs for new buildings would be sanctioned. Control should be exercised in such matters, among others, as general street improvement, harmony and symmetry in the design of new buildings, and the settlement of questions in regard to right of light, party walls, etc."

Architectural Work in Dublin.

The Committee of the Architectural Association of Ireland have passed the following Resolution:—"In view of the large amount of impending architectural work in Dublin, the Committee of the Architectural Association of Ireland desire to call the attention of architects in practice and assistants to the Register which is kept at the Association Offices. This Register—under the present abnormal conditions—they have decided to throw open free of charge. Every effort will be made to assist practising architects and assistants at the present juncture." Applications should be addressed to:—The Hon. Secretaries, Architectural Association of Ireland, 15 South Frederick Lane, Dublin.

The New Indian Capital.

The *Times* reports that the construction of New Delhi is making satisfactory progress, having regard to the curtailment of the Budget allotment, in consequence of the war, to £333,000 last year and to the same figure for 1916-17.

Much of last year's grant was expended on the many preliminaries required for transforming the rough site into a fine city by levelling, making roads, digging foundations, collecting material, and manufacturing bricks.

The Indian clerks' quarters and the menials' quarters have been completed, and bungalows have been provided for the occupation of the works staff. Experimental bungalows for the higher officials, to be built in the neighbourhood of Government House, are being put in hand, and are expected to be ready for occupation early in 1918.

Meanwhile the central point of interest in the plan has been given careful detailed consideration by the Government and the architects. The foundations of Government House and the large blocks of Secretariats by which it will be flanked have been laid and the basement walls are going up. An indication of the progress at the Governmental centre on Raisina Hill is to be seen in the Royal Academy, where the statues of their Majesties, in Coronation robes, which are to be placed in front of Government House, are exhibited. That of the King, by Mr. Mackennal, is the gift of the Maharaja Sindhia of Gwalior, and that of the Queen, by Sir George Frampton, is the gift of the Maharaja of Bikanir. The keen interest of the ruling princes in the transfer of the capital, which is very welcome to them, is further shown in the gift by the Maharaja of Jaipur of the commemorative column in the central avenue. The column, surmounted by the Star of India, will be well seen from the "Great Place" leading to the central avenue.

Suggestions have been made for completing this avenue, sited upon Indrapat, by a stately colonnade, entered by

three large gateways, to commemorate the Indian heroes of the war.

Mr. Wm. Woodward.

Members will be pleased to hear that Mr. Wm. Woodward [F.], who has been seriously indisposed for some time, is now convalescent, and was present, looking remarkably well, at the General Meeting last Monday. The President, from the Chair, gave expression to the pleasure felt by members at Mr. Woodward's presence among them again, and Mr. Woodward briefly responded.

A New Architectural Monthly.

The *British Architect*, after forty-three years as a weekly publication, is now making its appearance as a monthly. An editorial foreword explains that the change has often been contemplated as affording better opportunities for the collection and publication of matter of permanent architectural interest than are possible in a weekly. Under Mr. Raffles Davison's able conduct, the *British Architect* has won for itself a unique position among the architectural journals. It is refreshingly independent in its views, always frankly expressing its own mind on the vexed questions of the moment, and with a watchful regard to the dignity of the art and the well-being of the profession which it is its mission to advance. The first number of the new monthly promises well. The reading matter is doubled in quantity, and there are several pages of illustrations, stitched in and paged as part of the text instead of being loosely inset as before. The illustrations include, besides examples of current architecture, a series of Mr. Davison's clever "Rambling Sketches" of modern memorials, reproductions of engravings of old designs for memorials, specimens of some of the late Mr. Mallows' beautiful pencil drawings now on view at the Institute, and a plan illustrating Mr. D. Barclay Niven's suggestions for a Road Bridge over the Thames at Charing Cross. The price of the new venture is threepence.

THE EXAMINATIONS.

Probationership R.I.B.A.

The following letter has been addressed from the Institute to the Masters of Public Schools throughout the United Kingdom who are members of the Head-Masters' Conference:—

DEAR SIR,—I am instructed to inform you that the Council of the Royal Institute of British Architects have decided to discontinue holding the Preliminary Examination which it has been hitherto necessary for a student to pass before being registered as a Probationer.

The Council do not in any way recede from the position which they have invariably taken that for anyone intending to devote himself to the practice of architecture a thoroughly good general education is essential, and that there should be included in that education the study of at least one modern language and of elementary mechanics and physics; but since the Preliminary Examination was started there has been a large increase in the number of public examinations which afford a test of general education, and this, combined with the system of leaving certificates, which will probably be largely extended in the future, has practically done away with the necessity for this Preliminary Examination.

In future all candidates desirous of qualifying as Pro-

bationers R.I.B.A. must produce evidence of their general education satisfactory to the Council. Such evidence would be a certificate of passing some recognised public examination, a school leaving certificate, or in cases where special circumstances have prevented a candidate from acquiring such certificate, a letter from the Head Master of his school certifying that he has undergone a course of study qualifying him to be registered as a Probationer.

The Examination in Geometrical or Perspective Drawing, and in Freehand Drawing, will still be continued for those candidates who are unable to produce satisfactory evidence in the shape of drawings of an elementary knowledge of these subjects.—Yours faithfully,

JOHN SLATER,

Chairman of the Board of Architectural Education.

MINUTES.

At a General Meeting (Business) held Monday 5th June 1916, at 4.30 p.m.—Present: Mr. Ernest Newton, A.R.A., *President*, in the Chair; 22 Fellows (including 14 members of the Council) and 4 Associates (including 2 members of the Council).—The Minutes of the Meeting held 15th May 1916 having been published in the JOURNAL were taken as read and signed as correct.

The Hon. Secretary having announced the death in action of Captain Gilbert Marshall Mackenzie, of the Seaforth Highlanders, it was resolved that the deepest regrets of the Institute for the loss of its gallant Associate be entered on the Minutes, and a vote of sympathy and condolence was passed to his bereaved father, Dr. Marshall Mackenzie [F.], and brother, Mr. Alexander G. Mackenzie [F.].

A vote of sympathy and condolence was also passed to the relatives of Captain William Harold Hillyer, R.E., *Student R.I.B.A.*, who was killed in action in France on the 22nd May.

Further, the decease was announced of William Leiper, formerly President of the Glasgow Institute of Architects and Member of the R.I.B.A. Council, who was elected Fellow in 1881 and placed on the List of Retired Fellows in 1912; and of Alexander Payne, late District Surveyor for South-East Hackney and Bow, elected Associate in 1870, Fellow in 1882, and placed on the List of Retired Fellows in 1913. On the motion of the Hon. Secretary the regrets of the Institute for the loss of its esteemed Retired Fellows were ordered to be entered on the Minutes and a vote of sympathy and condolence was passed to their near relatives.

The following candidates were elected by show of hands under By-law 10, viz.:—

As FELLOWS (6).

FARROW: GEORGE REGINALD [A. 1908].
VARDELL: CHARLES EDWARD [A. 1900, *Griswell Medallist*].

Together with the following Licentiates who have passed the Qualifying Examination:—

CRATNEY: EDWARD, Wallsend-on-Tyne.
LOVEGROVE: GILBERT HENRY.
POULTER: BRIANT ALFRED.
THOMSON: JAMES, Dundee.

As ASSOCIATES (11).

[All candidates passed the Qualifying Examination last year.]

CHEEK: CYRIL CLIFF [S. 1912].
COLBECK: HENRY [S. 1909].
FYFE: JAMES SIMPSON [S. 1913], Sheffield.
GALE: CHARLES HENRY [Special], M.Inst.C.E., Hong Kong.
GEE: ERNEST [S. 1913], Chester.
HILL: CLAUDE EDGAR [S. 1911], Sheffield.
HULL: JAMES VINCENT [S. 1913], Garstang, Lancs.
PICTON: CLARENCE SPENCER [S. 1913].
RAINGER: HERBERT THOMPSON [Special], Cheltenham.
ROUGH: JAMES WILFRED [Special], Invercargill, N.Z.
VINDEY: GILBERT [S. 1912], Reading.

The proceedings closed at 4.45 p.m.

OBITUARY.

Alexander Payne, who died on the 10th May at the age of seventy-one, was elected Associate of the Institute in 1870, Fellow in 1882, and was placed on the List of Retired Fellows in 1913. Until three years ago he was District Surveyor for South-East Hackney and North Bow, an appointment he had held since January 1880. Mr. Payne was articled in 1860 to Messrs. Pritchett & Sons, of York, Huddersfield, and Darlington. He commenced independent practice in London in 1867. Among his works are the Parsonage House, Ettingshall, Wolverhampton; British Workmen's Institute at Lewes; New Wing to the Cherry Orchard, Charlton; Showrooms, 73 and 75 Brompton Road; 4 Savile Row, W.; Convalescent Home, Quinton, Worcestershire; Factory and Collecting Stations, Oldham; Workmen's Club, 147a Fulham Road; 13a High Road, Knightsbridge; alterations and new erections, New Church College, Islington; Warehouse, 54 Victoria Park Road, E.; Buildings for Waterworks at Tamworth, &c.

NOTICES.

A GENERAL MEETING (ORDINARY) will be held MONDAY, 19th JUNE 1916, at 4 p.m., for the following purposes:—

To read the Minutes of the General Meeting (Business), held Monday, 5th June 1915; formally to admit Members and Licentiates attending for the first time since their election.

To present the Royal Gold Medal for the promotion of Architecture, conferred by His Majesty the King, to Sir ROBERT ROWAND ANDERSON, LL.D., F.R.S.E. [F.] in recognition of the merit of his executed work, his services to architectural education, and his high character and lofty ideals in the art of architecture.

Licentiates and the Fellowship.

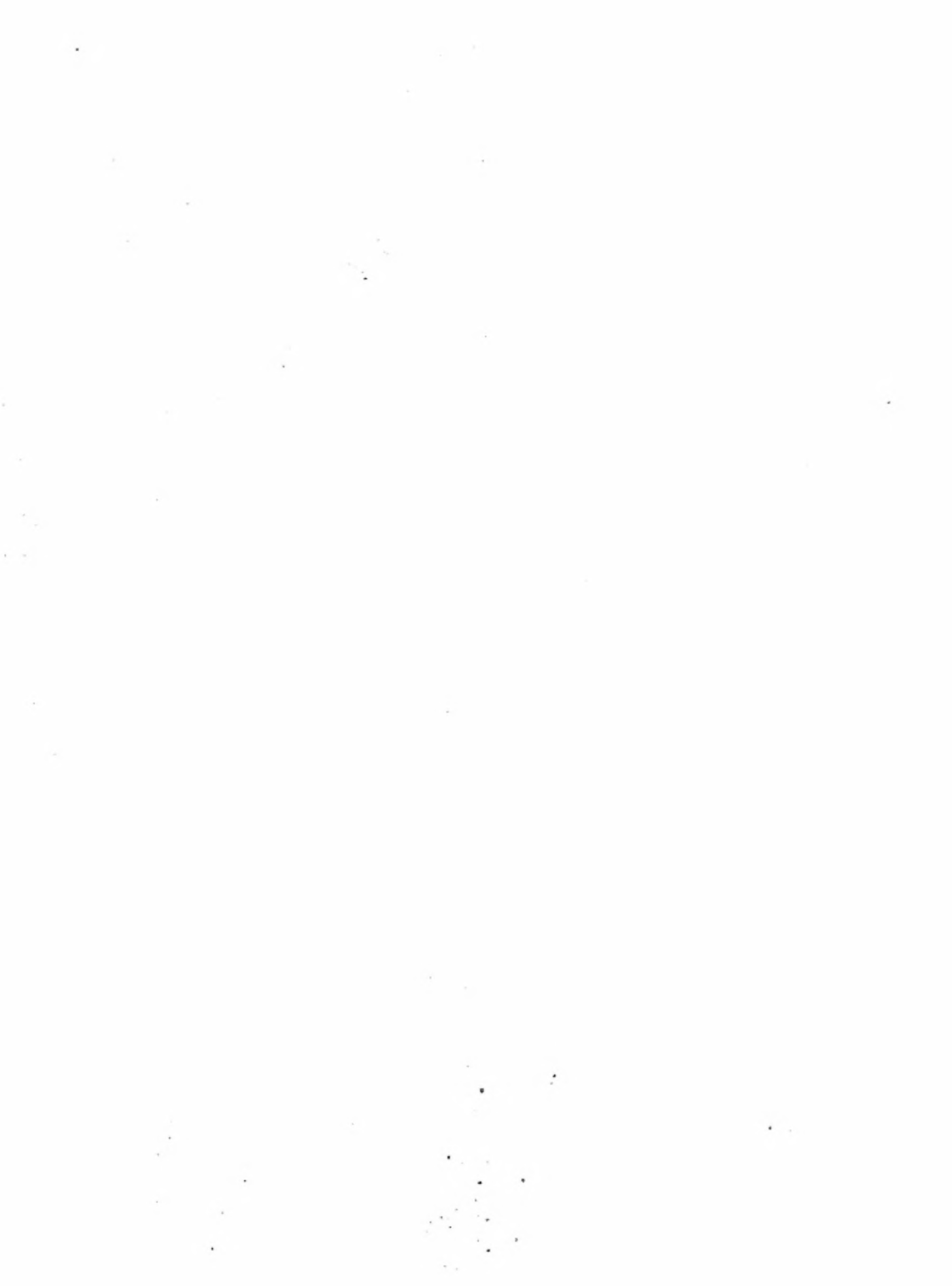
The next Examination of Licentiates desiring to qualify for candidature as Fellows will take place in January 1917. Applications for admission to the Examination must be sent in by the end of the current year. Full particulars may be had on application to the Secretary, R.I.B.A.

The Port of London.

At a meeting of the London Society to be held at the Royal Society of Arts, 18 John Street, Adelphi, on the 19th June, at 5 p.m., Mr. Arthur Crow [F.] will read a Paper, illustrated by lantern slides, on "The Port of London—Past, Present and Future."

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SIR ROBERT ROWAND ANDERSON, LL.D., F.R.S.E.,
Fellow of the Royal Institute of British Architects,
ROYAL GOLD MEDALLIST 1916.



THE ROYAL GOLD MEDAL.

Presentation to Sir ROBERT ROWAND ANDERSON, LL.D., F.R.S.E. [F.], at the General Meeting, Monday, 19th June, 1916.

ADDRESS BY MR. ERNEST NEWTON, A.R.A., *President*.

MY LORD PROVOST, LADIES AND GENTLEMEN,—We are assembled here this afternoon to do honour to a great Scottish architect, Sir Robert Rowand Anderson.

I regret very much, and I am sure that you regret also, the absence of Sir Rowand on account of illness, and that you will wish those who represent him on this occasion to convey to him our sympathy and to tell him that, although his absence has given us the pleasure of welcoming Sir Robert Inches, the Lord Provost of Edinburgh, who has so kindly honoured us by coming expressly to receive the Medal on Sir Rowand's behalf, and Mr. Lorne Campbell, who will read Sir Rowand's Address, we were looking forward to the occasion as an opportunity of testifying personally to him our admiration for his work as an architect, and our appreciation of the great services he has rendered to architecture.

This is the second occasion on which I have had the honour of presenting the Royal Gold Medal, and each occasion has had this special point of interest. Last year the recipient was Mr. Frank Darling, who was the first Canadian architect to receive this mark of the esteem of the Royal Institute of British Architects. This year the Medal in being conferred on Sir Rowand Anderson goes for the first time across the Border.

This is one of those occasions on which the President is not expected to do more than make a few prefatory remarks before presenting the Medal, and he then leaves the field to others, but Sir Rowand Anderson has had such a long and distinguished career that it is difficult to condense even introductory remarks into a becoming length. He was born in the year 1834, and I have obtained from him, in his own words, the following interesting sketch of his career :—

"Like some others, I was not brought up to architecture in the recognised way—that is, by means of an apprenticeship—but was articled to a lawyer in the hope that I would follow a legal career. After four years spent in what to me was most uncongenial work, my parents recognised the inevitable and allowed me to follow the profession of architecture.

"I became a pupil of a teacher of architectural drawing, and entered also the Architectural Section

of the School of the Board of Manufactures, the precursor of most of the schools of design in this country. I afterwards left for a year's residence in Italy and France, where I spent my time in measuring and drawing work of the Renaissance and Mediæval periods.

"On returning to Edinburgh I spent some time in several offices, took part in some competitions, gained some and lost others. In 1875, when the new schools were being built under the Education Department, I was invited to enter a limited competition of six. I came out first, and the carrying out of three of the largest schools was entrusted to me.

"In 1878 the University of Edinburgh launched a large new scheme for housing all their medical classes in one building, and invited six architects to submit plans for the same. I was one of them. Previous to preparing my plans I made an extensive tour in Germany, France and Holland to examine and make myself acquainted with the new buildings that had been erected at the centres of education there, so that my design might be applied to the new methods of teaching. My plan, which was based entirely on the use to be made of these buildings, carried the day, and I was appointed architect. Later on I was asked to design and carry out the great Graduation Hall, known as the McEwan Hall, and other buildings for the University, and also for the University College at Dundee.

"As architect to the Board of Manufactures I designed and carried out the Scottish National Portrait Gallery and National Museum of Antiquities, Edinburgh; also the restoration of the cathedral at Dunblane, which at the time was under their jurisdiction.

"These were followed by a number of public and private buildings."

A complete list of Sir Rowand's works will appear in our JOURNAL, but amongst them the following, photographs and drawings of some of which are on the walls, demand particular mention:

Public Buildings.—New Medical School, Edinburgh University. He won this in competition and the buildings have cost in all nearly £1,000,000. (Included in this group is the well-known McEwan Hall.) The Central Station Hotel, Glasgow; the Scottish Conservative Club, Edinburgh; the National Portrait Gallery, Edinburgh; the Pollokshaws Town Hall.

Churches.—The Catholic Apostolic Church, Edinburgh; the Govan Parish Church; St. Paul's Church, Greenock; Glencorse Parish Church; Inchinnan Parish Church; St. James's Episcopal Church, Inverleith; the Episcopal Church, Stirling; the Episcopal Church, Colinton; the Episcopal Church of St. Andrew's, Kelso; the Episcopal Church, Forfar; the Episcopal Church of St. Augustine, Dumbarton; the Episcopal Cathedral Church of St. Andrews; All Saints' Church, Parsonage and Schools, Edinburgh; St. Margaret's Roman Catholic Church, Dunfermline.

Public Memorials.—The Buccleuch Memorial, Edinburgh; the Montrose Memorial, Edinburgh; the Inglis Memorial, Edinburgh.

Domestic Work.—Mount Stuart House, for the Marquis of Bute; a mansion at Glencoe, for Lord Mountstephen.

Restorations.—He has carried out important restorations at Dunblane Cathedral; King's College Chapel, Aberdeen; Bothwell Collegiate Church, and at Jedburgh and Kelso.

Schools.—In the early part of his career he carried out several large schools for the Edinburgh School Board.

One might have thought that the carrying out of such a formidable list of important works would have been sufficient to absorb the energies of any ordinary man, but, with all these heavy responsibilities, he nevertheless found time to devote to the improvement of architectural education in Scotland.

The Edinburgh School of Applied Art, now merged in the Architectural Section of the Edinburgh College of Art, owes more to him than to any other man, and many of the schools since started throughout the country are based on the principles laid down by him.

He presented a valuable collection of architectural books and casts to the School, as well as a large number of measured drawings of Scottish ecclesiastical and mediæval buildings, prepared at his own cost. These drawings now form the greater part of the collection of the National Art Survey of

Scotland; they are of great educational value, and a lasting record of buildings many of which have already disappeared.

I wish I could speak from a personal knowledge of Sir Rowand's actual buildings, but such is my incurable distaste for travel and adventure that I blush to have to confess that it is more than forty years since I made my first and only visit to what was then rather a far country. I will therefore avail myself of the appreciation of one who has been more fortunate in this respect than I have, and who gives as the characteristic quality of his work its evident integrity, each building being thought out for its special purpose with a simplicity and directness of conception which dominates the whole design, the beauty of any particular motif or the careful study of its detail never being allowed undue prominence, each work being eloquent of the conscientious study of the requirements and purposes of the building and of his knowledge of and sympathy with the various crafts employed.

It is not too much to say that his work and teaching have not only influenced large numbers of architects now in practice, but that many of the building firms in Scotland owe their capacity for fine craftsmanship and selection of material to his work and guidance.

As a proof that this high view of Sir Rowand's attainments is shared by others outside Great Britain it is only necessary to mention that he has been awarded Medals in Paris, Munich, and Chicago. Our own country, true to her traditions, is the last instead of the first to mark the appreciation which it has long felt for one of Scotland's most eminent architects.

My Lord Provost, I now have the pleasure of presenting this—His Majesty the King's Gold Medal for Architecture—to you as representing Sir Rowand Anderson. I should like you to tell him that it was awarded to him by the unanimous vote of the Council and of the Members of the Royal Institute of British Architects, and that we are proud to have his name on the roll of those who have been honoured by this distinction.

The Right Hon. Sir ROBERT INCHES, Lord Provost of Edinburgh, having accepted the Medal on behalf of Sir Rowand Anderson, the PRESIDENT read the following letter from Sir ASTON WEBB, R.A. :—

19 Queen Anne's Gate, Westminster, S.W. : 19th June 1916.

DEAR MR. PRESIDENT,—I very much regret being unable to be present to-day when the Royal Gold Medal of the Institute is to be so worthily presented to Sir Rowand Anderson.

I have had the honour of knowing Sir Rowand for some years and should like to express my admiration for his work not only as an architect, in which of course he excels, but also for the high example he has set to all of us during his long life.—I am, yours truly,
ASTON WEBB.

Mr. ALEXANDER LORNE CAMPBELL, [F.], Past President of the Edinburgh Architectural Association, said : Before reading Sir Rowand Anderson's Address, may I mention in explanation of his absence that Sir Rowand, who is in his eighty-third year, has lately passed through a severe illness and is still in a rather frail condition. I saw him on the morning before I came away, and he particularly desired me to express to the Institute his very great regret at not being able to be present in person. He has asked me, partly as a fellow-architect but more particularly as a personal friend, to read the Address which he himself would have delivered, and I have great pleasure in doing so.

SIR ROWAND ANDERSON'S ADDRESS.

MR. PRESIDENT, LADIES AND GENTLEMEN,—This unexpected and great honour which has come to me from the King acting on the advice of this Institute, and the generous and appreciative remarks of the President, and the reception you have given to them, make it very difficult for me to frame an adequate reply.

This Gold Medal may be justly looked upon as the blue ribbon of the profession. It is not a political or social honour like the blue ribbon of the Order of the Garter, of which Lord Melbourne, Queen Victoria's first Prime Minister, on the occasion of the selection of someone to fill a vacancy in that exalted Order, said there was no difficulty in making a selection as there was no "damned merit"

about it. Now, quite the contrary is the case here. Merit, you say, is the sole title recognised by this Institute. The difficulty in making a selection from a body where so many are worthy of the honour is great, and on the list there is no name that does not reflect the care with which it has been chosen, and none with whom it is not a great honour to be associated.

Our President has told us that this is the first time that the Royal Gold Medal has crossed the Border. That is an additional reason why I should feel proud to be the one selected to receive it, and this unique event gives me an opportunity of pointing out to you that although this is the first time that such an honour has crossed the Tweed northwards, there has been a steady flow southwards from Scotland of much architectural talent, contributing greatly to the advancement of our art. From the time of the Union of England and Scotland, which, though largely accomplished by intrigue and bribery, has nevertheless resulted in great blessings to Scotland, as well as to England, the road to the south became the great highway for Scotsmen in search of fame and fortune, and in spite of much opposition and prejudice many found them.

The first man I should refer to is Sir William Bruce, of Kinross, a contemporary of Sir Christopher Wren. His connection with England is very slight. He appears to have done some work at Ham House, in Surrey, for Lady Dysart.

The next name of any consequence is James Gibbs, of Aberdeen, born 1674, died 1754. He studied for some years in Rome, and returned to London in 1710, where, under the influence of his early patron John Erskine, Earl of Mar, he soon rose to fame.

Colin Campbell, a Glasgow architect, well known as the author of the *Vitruvius Britannicus*, under the patronage of the great Chief of his Clan, the Duke of Argyll, removed to London and carried on a considerable business as an architect.

The Milne family have a long and continuous connection with building and architecture. A Milne appears as master mason to King James III. of Scotland. His family can be traced down to the end of the eighteenth century, and had a hand in almost everything, such as royal palaces and castles, town halls, &c., &c., and many bridges. Robert Milne, a descendant of the master mason of King James III., was born in Edinburgh in 1733. After about four years studying architecture in various parts he returned to England in time to take part in a competition for the new Blackfriars Bridge, and was successful against sixty-nine competitors. From this time work flowed in on him, and in 1766 he was appointed Surveyor to St. Paul's Cathedral, and it was he who suggested the widely known epitaph to Sir Christopher Wren. He has a further claim to the remembrance of this Institute, in that he was an original member of the Architects' Club, founded in 1791, which dined once a month in the Thatched House Tavern during the season, out of which gathering grew the present Institute.

The next best known name is that of Adam. The three sons of William Adam, of Maryburgh, in Fife, himself an architect of great repute, with many good buildings to his credit, made their descent on London in 1768. Their influence on architecture exists to the present day. A Wren church and an Adam house still hold their own.

I could prolong this list, but will close it with the names of two men who have done much to deserve to be remembered and held in esteem—the late Richard Norman Shaw and John McKean Brydon, both of them my countrymen.

You have been good enough to include my services to architectural education as one of the qualifications for my receiving this Gold Medal. I acknowledge most gratefully your reference to this. I began to take an interest in architectural education in 1892. South Kensington up to that time had the entire control of art education, but the education they gave never seemed to produce any result beneficial to the architectural student, and it is not difficult to see why this was so. The system of payment by results poisoned the whole thing. The teachers' income rose and fell according to the number of the prize drawings produced by the student. These had to be worked up to a standard of excellence, as drawings, to meet the views of the examiners in London. So it eventually came to pass

that the school existed for the benefit of the teacher more than for the taught. The hopelessness of expecting anything to come out of this system of teaching as regards architecture culminated in 1892. A number of architects and others, including myself, with the aid of the Board of Manufactures, then combined to start a school entirely free from the baneful influence of South Kensington. I should here inform you that the Board of Manufactures came into existence about the time of the Union of Scotland and England, and administered some of the money known as the Equivalent Grant for the Advancement of the Arts and Industries of Scotland. In addition to what this Board was able to do for us, a fair amount of money was subscribed by those interested in this new departure. But the scheme was nearly wrecked by the difficulty of getting a Director of sufficient standing and acquirements for such a salary as we could afford. So, to prevent the collapse of this promising movement, I was asked, and undertook, to act as Honorary Director. I gave as much time as I could possibly spare to what has always been to me interesting work. With the assistance of one or two paid teachers a start was made. From the very first the scheme caught on. It gradually became recognised by the student as the best means of getting an education to supplement what he was acquiring as a pupil or apprentice in a private office. It would take up too much of your time if I gave a detailed account of the school work, but I shall allude to one or two of the leading features of it. In the beginning of my architectural career I kept myself in contact with the best work of the past by spending all my spare time in sketching and measuring both at home and abroad, including a year in Italy and France. There was no golfing for youth in those days. Knowing the benefit I derived from this, I thought we could not do better than make the study of old work the basis of our teaching. With the consent of the committee this was done.

Another important feature in our teaching was the organising of a scheme for obtaining accurate records of buildings erected previous to the eighteenth century. This was called a National Art Survey. It was a very ambitious scheme, but it worked out all right. Two of the best draughtsmen were selected annually, and to enable them to devote their entire time to the work they were paid small salaries, and in addition an allowance for travelling and incidental expenses. All the drawings made by them became the property of the school. This work has been going on since 1894, but has been stopped for the last two years owing to the war. There are now something like two thousand sheets, forming, I should say, the finest collection in this country. It contains, in addition to the surveys of the buildings, a large collection of drawings and details of early plaster work, wall panellings, fireplaces, and a most interesting collection of old furniture to be found in buildings still inhabited. The result of all this has been most stimulating. I never knew a more enthusiastic or industrious set of students. The work they produced was of a very high standard of excellence, and some of them secured many of the coveted prizes which you offer here to competitors from all quarters. On leaving the school the students have always been greatly sought after as assistants. They are scattered all over Britain and its Overseas Dominions, and from letters I have often received they all attribute their success to the sound practical education they had received.

I have always contended that the degree of beauty we see in our buildings and the satisfaction we derive from them depend largely on their fitness and the more or less successful expression of the purposes that call them into existence. One or two examples from my own town of Edinburgh will bring my meaning home to you. Take the Royal High School and the Surgeons' Hall, both of which belong to the period of the Greek revival. They were designed by men thoroughly educated in the art of their day, and looked at as abstract pieces of design they are of the highest order, but the façades of these buildings are not the product of the buildings they are attached to. They are mere screens to mask what is behind them, and that might have been anything other than what is actually there. Now, let us take a look at the great valley that divides the old from the new town. Overhanging the steep cliffs of the Calton Hill is seen what looks like a castle. As a matter of fact it is mistaken by many who enter Edinburgh for the first time by the North British Railway, to be the world-wide known

Edinburgh Castle. It is actually the Calton Jail. I remember meeting the late Mr. Billings, the architect, and author of the *Baronial and Ecclesiastical Antiquities of Scotland*, a work which had a great influence on the domestic architecture of Scotland for many years during the last century. I had just before then seen a building of his erected for a waterwork. It took the form of a castle, and I asked him why he made this work like a castle and not something evolved out of the use of the building. He replied, "Can you tell me what a waterwork is like, as I must have a type to work from?" As I could not do so or convince him that, as he ought not to build a waterwork like a castle, he might at least approximate to something characteristic of the purpose of the building, I had to retire from the dispute, leaving Mr. Billings quite satisfied that his imitation castle with a high tower was a very good representative of a water-pumping station. The architect of the Calton Jail, the building I have referred to, under the influence of the prevailing taste of the day, must have looked at the problem he had to solve from the standpoint of working from a type, and so he chose a castle, but as a castle is a building to keep people out, and a jail to keep people in, see what a deplorable result: one of the finest sites in the world covered with a toy castle, devoid of expression and utterly meaningless.

Again, if you take the plans of the old Scottish castles or mansions of the sixteenth and seventeenth centuries, you can read them like a book from the foundations to the chimney-tops. You can distinguish the original tower that the family once lived in and held its own against all comers. On further examination you will notice an addition made when the family became richer and times were not so warlike, and as time rolled on and it was no longer necessary to provide for defence you will find larger additions. But now, everything is done for comfort, as understood in those days, and a peaceful country life, the whole group becoming wonderfully picturesque; but it was never built to look picturesque or interesting; it was built from time to time to suit the necessities of the day and the means of the family, and hence its resulting picturesqueness. Contrast with this the mansions erected in imitation of the old ones, and try to read them from the inside to the outside or the reverse. You cannot do so, as the one contradicts the other. The whole thing is a modern house, a very modern house, masquerading as a castle of a territorial baron, and so you have everything in these buildings that is false, misunderstood and misapplied, the result being a costly delusion that such a building is true art and in harmony with the traditions and scenery of the country.

The aim of the teaching in our school was to counteract this sort of thing by teaching the students to look at buildings with an analytical eye and to dissect them as a medical student does his anatomy, and to realise the ideas and purposes that call the buildings into existence. The seed sown by this School and others which have wisely adopted our system of teaching was bearing good fruit before the outbreak of this terrible and unjustifiable war, and there were signs everywhere in Scotland that we had begun to develop architecture, especially in domestic work, on right lines with a distinct national bias. The contention that Gothic and not Italian, or *vice versa*, was the only style fit to be used in this country has spent itself, and there is now better Gothic and Renaissance work being done than during the period of the Battle of the Styles, as well as a growing absence of those inconsistencies I have alluded to, and I believe we can now look forward to our buildings becoming more and more characteristic of the age and purposes to which they are devoted.

With these few and inadequate remarks I again offer my grateful thanks to His Most Gracious Majesty and to this Institute for the great honour conferred upon me to-day, an honour well worth a lifetime of earnest labour and thought, to advance that art to which we are all devoted.

Sir JOHN BURNET, R.S.A., LL.D., *Vice-President*, rising at the instance of the President, said: I have been asked to propose a vote of thanks to the Rt. Hon. Lord Provost of Edinburgh for his presence here to-day. Before doing so I would like, Mr. President, to add a word to what has been so well said by you of our

distinguished colleague, Sir Rowand Anderson, and so modestly referred to in his Reply.

The inception of the School of Applied Art in 1892 was, I am informed, due to Sir Rowand Anderson, and to him alone, though he was supported in his scheme by others, and had it not been for Sir Rowand under-

taking the position of Honorary Director, the School could not have been carried on. That he should have found time to fulfil the duties of such a post till 1892 and to continue as a member of the Board of the College of Art till 1913, so giving himself for twenty-one years to the cause of architectural education, is the more remarkable when it is remembered that during these years his greatest works were being carried out.

With regard to the three Schools for the Scottish Education Department to which you referred, the demands of that Department have greatly developed since these Schools were built. The Department's requirements have become more complex and are now more fully detailed, but Sir Rowand Anderson's study for these buildings was so thorough, and his appreciation of the spirit of the Board's requirements so keen, that even at this date I am told his brother architects now engaged in the realisation of the Board's ideals, admire and find inspiration in these Schools. Now, when every day the demands of the public are becoming greater and their organisations more complex, calling into existence materials and methods of construction lately unknown, it is well to hear from one who has so clearly "read" and so successfully met the needs of his day, that it is in the consideration of these needs and resources and in the resulting fitness of each building for its purpose that the architect succeeds in producing that feeling of satisfaction which Sir Rowand Anderson acknowledges is at the basis of any beauty seen in our buildings. We are all indebted to the past and note with profit its experiences, but we are all indebted also to the present, and to those men who, like Sir Rowand Anderson, have made the needs of each building a subject of earnest research and, keeping clearly before them the fitness of the structure for its purpose, have been content to express it with that breadth and simplicity, free of all conscious effort to produce effect, which characterises the masterpieces of all time.

It requires few words from me to commend my motion to you. Sir Robert Kirk Inches, coming from Scotland for the express purpose of receiving, in the regrettable absence of Sir Rowand Anderson, the Royal Gold Medal which with the approval of His Majesty has been awarded to him, comes at a time when, as we all know, he must have many and heavy responsibilities. His presence as the head of a great Corporation is a graceful compliment, and we heartily congratulate Sir Rowand on the testimony it affords to the respect and esteem in which he is held in Edinburgh. For ourselves, we keenly appreciate not only the Lord Provost's presence with us in the tribute we pay to our distinguished colleague, but the sympathy with our Art which it implies. It is worthy of the Civic Chief of one of the most beautiful cities of our Empire—a city which in the past has appreciated how the natural beauties of its position might be emphasised by architectural treatment, and it remains a monument to the enlightened culture and breadth of view of

its citizens. I need not say Scotland is proud of its capital. It still remains the home of art and letters in Scotland, and its Corporation, of which Lord Provost Inches is the head, takes a keenly practical interest in all that concerns its welfare, and is its guardian in more than name.

Mr. J. ALFRED GOTOR, F.S.A., *Vice-President*: Mr. President, ladies and gentlemen, I have great pleasure in seconding this vote of thanks to the Lord Provost for having come these hundreds of miles in order to receive the Gold Medal on behalf of a friend and fellow-citizen. It surely must be a great privilege as well as a great delight to be Lord Provost of Edinburgh, a city so full of romance, so renowned in history, and blending in so singular a way the charm of the past with the prosperity of the present. To the whole world, and in more particular degree to the lovers of Scott—of whom I confess myself to be among the most ardent—Edinburgh must always be a City of Enchantment. Do Catherine Seytons, I wonder, still vanish from the eyes of Roland Grames through the courtyard of some ancient house? Do Counsellor Pleydells still practise high jinks on Saturday nights? Do vendors of patent detergents still offer to eradicate the stain of Rizzio's blood from the floor of Holyrood? Or have they fled for ever, daunted by the long rows of modern streets, the huge masses of modern factories, the lofty chimneys of modern commerce, which symbolise the wealth of to-day? Doubtless it is with the present rather than the past that the Provost has chiefly to concern himself; and, doubtless, in his far-off delightful city he watches with complacency the smoke of its prosperity curling through the halo of its romance. To him, and to all who work with him, we offer our best wishes, and an expression of our conviction that the noble heritage which has fallen into his hands could not have found a more worthy keeping. I beg to second the vote of thanks.

The Resolution was carried by acclamation.

The Right Hon. Sir ROBERT INCHES, Lord Provost of Edinburgh: Mr. President, Sir John Burnet, ladies and gentlemen, It is a very great pleasure to me to be here to-day to take possession of this Medal, which I will very carefully take to Sir Rowand Anderson, and describe, as far as I can, the presentation of it. I was associated with Sir Rowand in the starting of the School of Applied Art, and I assure you that nothing was more gratifying to the citizens of Edinburgh, especially to those who take an interest in applied art, than the fact that he came forward and offered himself as Director of the School. He did that without fee or reward. He presented very many valuable specimens, not only in the way of photographs and drawings of architecture, but in pieces of colour—as colour work was a great part of our scheme—and Sir Rowand devoted day after day and night after night to bringing forward these students. And I rather think—though I am not quite sure—that they got prizes at this Institute, or some other Institute in London. They did what most Scotsmen do when they

come South, reached top notch! I was once asked by an innkeeper at Rottingdean if I could tell him why it was that you never found the footprints of a Scotchman pointing north. I said I did not know that I was one of those who came South and never went North again. I never rued going back North. "That is not the answer," he said. "When they are going South it is their *footprints*; but when they go North it is their *bootprints*!" (Laughter.) I esteem it a very high honour to be Lord Provost of Edinburgh, and there is nothing I would not have done for Sir Rowand Anderson if he had asked me to do it, simply on account of my association with him and what he has done for the city, and also what he has done to improve not only the architecture of the city, but the architects of the city. (Hear, hear.) He has always been a tower of strength, and he has never been known to give way on a point that he thought was really vital in the matter of architecture. I do not wish to make a speech about his work; you have photographs of many examples of it here: I see, for instance, McEwan Hall, and a number of others. But one thing I would like to speak about in connection with his work. He presented to the city four halberds, which are always carried in front of the Lord Provost. In my day I have always insisted upon these halberds being carried, because I think it does something to keep in mind what Sir Rowand Anderson did for us. He wrought for more than a year on these halberds, and they are very fine specimens of what used to be done in damascene work. I see there are sketches of them at the end of the room. In conclusion, I wish from my heart to thank you, gentlemen, for the very cordial reception you have given me, and to say there is no need to thank me. I come here with the very greatest of pleasure. My only regret is that Sir Rowand is not able to be here himself. I am sure he would have been more than delighted. But when you consider he is eighty-three years of age, that he has been a man who has worked up to the very last, I think you will agree with me that if his doctor told him he was not to come, the best thing he could do was to stay at home. I thank you very much for your reception, and I will convey this Royal Gold Medal to Sir Rowand Anderson.

LIST OF SIR ROWAND ANDERSON'S WORKS.

PUBLIC BUILDINGS.

Edinburgh University.—New Medical Schools; McEwan Graduation Hall; Old Building, new Dome over entrance to Quadrangle; New Engineering and Physics Laboratories. Scottish National Portrait Gallery and Museum of Antiquities, Edinburgh. Scottish Conservative Club, Edinburgh. Central Station Hotel, Glasgow. Sir William Pearce Memorial Institute, Govan. Dundee University.—New Engineering and Physics Laboratories. Pollokshaws Town Hall. New Estate Offices, Greenock.

Crum Memorial Library, Thornliebank. Charlestown Hall, Fife. Dollar Academy.—Science Laboratory. Fettes College.—Science Rooms and Sanatorium. Rosslynlee Asylum, additions and alterations. Montrose Asylum, additions and alterations. Hall of the Royal Company of Archers, K.B.G.S., reconstruction and additions. Assembly Rooms and Music Hall, Edinburgh, additions and alterations. Students' Union, St. Andrews, remodelling. Senatus Room, St. Andrews, remodelling.

CHURCHES.

Parish Church, Govan. Inchinnan Parish Church, Renfrew. St. Paul's Parish Church, Greenock. St. John's Church, Canongate, Edinburgh. North Berwick Parish Church. Glencorse Parish Church. St. James's Episcopal Church, Cupar. St. John's Church, Alloa. St. Andrew's Church, Kelso. Christ Church, Falkirk. St. James's Church, Inverleith, Edinburgh. All Saints' Episcopal Church, Edinburgh. St. Augustine's Church, Dumbarton. St. Michael and All Angels Church, Helensburgh. St. Augustine's Church, Tynemouth. Inveraray Episcopal Church. Stonehaven Episcopal Church. Forfar Episcopal Church. New Episcopal Church, Stirling. Holy Trinity Church, Dunfermline. St. Cuthbert's Episcopal Church, Colinton. St. Andrew's Episcopal Church. St. Serf's Episcopal Church, Dunimarle, Culross. Catholic Apostolic Church, Edinburgh. St. Margaret's Roman Catholic Church, Dunfermline. Galston Roman Catholic Church, Galston, Ayrshire. Morningside U.F. Church. St. George's U.F. Church, Edinburgh (Campanile).

RESTORATIONS AND RENOVATIONS.

Dunblane Cathedral. Paisley Abbey. Culross Abbey. Kelso Abbey. Jedburgh Abbey. Sweetheart Abbey. Dunfermline Abbey. King's College Chapel, Aberdeen. St. Mary's Church, Hawick. St. Bride's Church, Douglas. St. Vigean's Church, Arbroath. Duddingston Parish Church. Eastwood Parish Church. Bothwell Parish Church. Kirkcaldy Parish Church. Sir George Mackenzie's Tomb (Lord Advocate to Charles II.), Greyfriars Churchyard, Edinburgh. Broughty Castle, Broughty Ferry. Ethie Castle, Forfarshire, the residence of Lord Northesk. Hoddam Castle, alterations and additions.

CHURCH HALLS.

Braid U.F. Church. All Saints' Mission Hall. Hamilton Parish Church. Dunblane Cathedral Halls. Normand Memorial Hall, Dysart.

SCHOOLS.

Public Schools, Fountainbridge, Edinburgh. Public Schools, Stockbridge, Edinburgh. Public Schools, Causewayside, Edinburgh.

Public Schools, Leslie, Fifo.
Public Schools, Kirkcaldy, Fifo.
Merchiston Castle School, Edinburgh, addition.

MANSIONS AND OTHER HOUSES.

Balmoral Castle, additions and alterations for the late King Edward.

Bhaile-na-Choile, Balmoral (Factor's House), additions and alterations.

Glencoe House for Lord Strathcona and Mount Royal.

Mount Stuart House for the Marquess of Bute.

Bell House, Mrs. Hamilton Ogilvy.

Allermuir House, Colinton.

Thirlestane House, Colinton.

Braeburn House, Currie.

The Swallowgate, St. Andrews.

Lady Flora Hastings' Homes, Colinton.

Houses in Edinburgh and neighbourhood (various).

Houses in Kirkcaldy.

Pollok House (additions), Sir John Stirling Maxwell.

Keir House (additions), Captain Stirling.

Broomhall House (additions), The Earl of Elgin.

Brankston Grange (addition), J. J. Dalgleish.

Keavil House (additions), L. Dalgleish.

Hopetoun House, for Marquess of Linlithgow, alterations and additions.

Luscar House, alterations and additions.

Sumburgh House, Shetland, alterations and additions.

Bush House, Roslin, alterations and additions.

Charlton House, Montrose, alterations and additions.

Freeland House, Forganenny, alterations and additions.

Hatton House, Midealder, alterations and additions.

Heatherlie Manse, Selkirk.

The Parsonage, Dumbarton.

All Saints' Parsonage, Edinburgh.

Bothwell Parish Church Lodge.

MEMORIALS.

The Marquis of Montrose (executed in 1650), St. Giles' Cathedral, Edinburgh.

Lord Justice General Inglis, St. Giles' Cathedral, Edinburgh.

Duke of Buccleuch, Parliament Square.

The Stirlings of Keir, Dunblane Cathedral.

Dean Ramsay, St. John's Church, Princes Street, Edinburgh.

Duke of Athole, Logierait, Perthshire.

78th Highlanders, Edinburgh Castle.

Mary of Lorraine, Edinburgh Castle.

Kirkcaldy of Grange, Edinburgh Castle.

Earl of Moray (1313), Edinburgh Castle.

Oliphant of Aberdalgie (1304), Stirling Castle.

Earl of Wharfedale, Newtyle Parish Church.

Archbishop Tait, Edinburgh University.

Stato Halberds for the Municipality of Edinburgh.

REVIEWS.

THE ENGLISH CHANCEL.

The Chancel of English Churches: The Altar, Reredos, Lenten Veil, Communion Table, Altar Rails, Housing Cloth, Piscina, Credence, Sedilia, Aumbry, Sacrament House, Easter Sepulchre, Squint, etc. By Francis Bond, M.A. With 229 Illustrations. 8s. 1916. 7s. 6d. net. [Humphrey Milford, Oxford University Press.]

Mr. Bond has found the study of the Altar and accessories mentioned in the sub-title one of exceptional difficulty. It is not at first apparent why this should have been the case, though the list of volumes in the bibliography is a long one. But when acquaintance with his book has ripened one does realise his difficulty in formulating a scheme whereby the subject might be presented in reasonable compass, even assuming on the side of readers acquaintance with religious ceremonies intimately connected with altar accessories. Recognition of difficulty brings appreciation not only of pains in keeping abreast with developed enquiry, ecclesiastical or purely antiquarian, but in weaving in with the text information of liturgical character considered indispensable. Truly, the subject has never before been illustrated in such comprehensive fashion, and the task of selecting and getting together the representative collection of photographs could have been no light one. With its wealth of illustrations, and teeming in interest, the book is of real and permanent value, and will be welcome to an exceptionally large circle.

The volume is a companion to its predecessor on Screens, in which the term chancel is used in a wider sense, for although the term has been convenient for a title, of necessity and naturally Mr. Bond falls into the use of other terms—presbytery, sanctuary, sacarium

—in the text. Supposing, however, the book on Screens is not at hand, even with the plentiful supply of photograph reproductions illustrating individual features for the most part Gothic, the want of one or two plans may be felt, and especially the want of something like a picture of a mediæval chancel. "The State of Melford Church and Our Ladie's Chappel at the East end, as I did know it," was graphically painted by Roger Martyn, Esq., who died c. 1580. The brief account, with relation of ceremonies connected with them, of the magnificent chancel fittings in the fine Church of Long Melford, Suffolk, before destruction had commenced, is a little touching, for it can be discerned that the loss of much sat heavily upon Roger Martyn. But it would make a fitting frontispiece, so to speak, to such a book as this: nothing could be more appropriate to a subject of which the key-note is mediæval devotion—the love of Church expressed in the most important part of the visible fabric, besides participation in traditional ceremonies. Mr. Bond does, indeed, quote extracts under headings of the subject, but it is a pity the picture is destroyed.

Martyn incidentally and lightly touches upon Palm Sunday and Corpus Christi Day processions which brought into use one kind of canopy not a structural feature of the fabric mentioned by Mr. Bond. On the part of the reader knowledge of the rites of Holy Week beginning with Palm Sunday will be an advantage; but the ceremonies of the Easter sepulchre Mr. Bond dwells upon with some fullness, quoting from the *Rites of Durham*, and leading to the subject of dramatic ceremonies with a quotation from *The Rouen Office* for Easter morning. The subject of Mystery Plays—performed eventually out of doors—

is then introduced. Originally, in simpler form possibly, they were acted in churches, or in the precincts thereof, by priests, assisted by clerks and boys. The subject of religious drama is a special study, and Mr. Bond merely brings it forward to help the reader chiefly with regard to the use of the Easter sepulchre, which was not always a permanent feature of the chancel. But if he would realise something of the origin of the mystery play, the reader should know that the influence of a religious instinct which brought about the interpolation of the trope in the old services whereby thoughts appropriate to the feast or season might be infused, most likely developed gradually dramatic dialogues; and likewise that the procession and ceremonies of Palm Sunday arose naturally in the East, having their origin at Jerusalem itself, and spread through Christendom by the ninth century.

A very distinguished authority upon the subject of mystery plays, Mr. Pollard, holds that we are imperfectly acquainted with their evolution, and that in the present state of knowledge it is dangerous to dogmatise. He instances an early allusion to plays "acted by the Grey Friars at Coventry," which are now referred to performances by the Guilds near the Franciscan Friary. The word *by* having been misunderstood, these plays were rashly identified with those supposed to have been performed by Friars. Mr. Bond, doubtless, is able to relate similar instances of misapprehension which betray lack of sound knowledge with regard to chancel accessories in some books he consulted and has not included in his carefully chosen bibliography.

One instance he gives is the confusion of the Lenten Veil and Rood Cloth. Yet—supplementing documentary evidence in the chapter devoted to the subject—the inventories of Long Melford Church alone, published by Neale in 1824, round about one hundred years ago, show the distinction clearly. The accounts of Wells Cathedral (1914) have items, one under date 1418–19, "Cords for the Lenten Veil and basins hanging in the choir and for drawing back the great *tabula* above the high altar," and others under date 1421–22, "Making an iron rod for the Lenten veil," . . . "One cord for the Lenten Veil before the Cross in the nave." A footnote at the beginning of Mr. Bond's chapter on the Veil states, "though there are no veils to the baldachinos at St. Peter's and at St. Maria Maggiore, Rome, yet the artist has perpetuated the tradition by providing them with vallances in bronze." We have seen similar vallances in wood in England; possibly an example is still in St. Mary Woolnoth, by Hawksmoor. However that may be, even with curtains something of a valance might be desirable.

Mr. Bond agrees with the conclusion that old English altars were usually furnished with riddels. Undoubtedly the use was frequent. It may be that the ecclesiastical fashion was disregarded at Long Melford; the inventory of 1529, apparently very exhaustive, appears to bear this out. The history of

church hangings—carpets and cloths and silks—would form an attractive book, which Mr. Bond may be tempted to write.

He has not dwelt upon the subject of the step or gradine which he mentions is occasionally found at the back of the (medieval) altar-slab, but there are useful footnotes inserted by his friends who revised the text. The first note enumerates some examples found in English churches—the thin slab on the back of the altar slab, forming a kind of shelf, and another shelf six inches above it in the window sill in Grantham crypt; part of an altar shelf at the west end of the tomb of Henry VII.; an altar shelf enriched with mouldings and carvings, and clearly intended to be seen, at Cold Overton, Leicester; marks of one at Romsey (reference given to Micklethwaite); a continuous altar shelf extending the whole width of the chancel, 5 feet 6 inches below the base of the east window, at Clapton-in-Gordano, Somerset, this example also moulded, with evidences that it formerly supported three statuettes, one on the north side and two on the south. The second note follows, instancing "a similar shelf" in the South Chapel at Christchurch, Hants, and proceeds: "It is probable that in all the above and similar cases the shelf was intended to support a small reredos; certainly candlesticks were not placed on it." Would these conclusions account for the thin slab at Grantham? And is it quite certain that candlesticks were not placed on any one of the shelves?

Some pages further on Mr. Bond reminds us that the development of the reredos took various forms in England, and, in a fresh sentence, expresses the view that probably one of the earliest forms, outside the catacombs and crypts, was the dorsal suspended at the back of the altar from hooks in the east wall. It is not quite clear whether Mr. Bond intends the later sentence to apply to England. A quotation given in a footnote avers that nowadays the dorsal is by far the most satisfactory form of reredos, and that, above all, the chilly stone reredos should be avoided. "Of course, if the church is great and rich, the reredos may contain subjects in sculptured alabaster, but these should be carved and gilded; so also should any reredos in wood, which, however, is a less desirable material. An exception may be made for the late Mr. George Tinworth's reredoses in red terra-cotta." Surroundings and circumstances must suggest treatment, but many will look to this treatise for information of what has been done in olden days. One or two illustrations taken from paintings or illuminations showing the dorsal and also riddels would be helpful. Such illustrations might be selected to illustrate likewise the footpace or platform on which the altar stands, giving the proportion and low rise, for, as Mr. Bond is careful to tell, the original levels of chancels have been tampered with, but the sanctuary steps were generally few, low, and broad. To this he adds a footnote, "The steps should not be more than 5 or 6 inches high and 3 feet broad." The tread and the rise should

be so proportioned that the structural result can be safely used as a step. A 5-inch rise is preferable, and there are sufficient grounds for limiting the width to 21 to 24 inches. A long stride should be avoided, and 3 feet is a width sufficient for a half-pace, on which a couple of steps might be taken before coming to another rise.

The term *half-pace* in an interesting way leads back to the altar shelf, the feature with which Mr. Bond has not dealt. A corruption of the earlier *haut-pace* applied to a step or raised floor or platform, and also particularly to the platform at the top of steps on which an altar stands, it also signifies a broad step between two half flights of a few stairs. By cross references in the *New English Dictionary* we find *haut-pas* (high step) was in common use in the fifteenth and sixteenth centuries and Anglicised in the form *halpace*, and the following are references cited:—under date 1507, *A will (Somerset Ho.)*, "an halpace of Tymbre werk . . for the Organs theron to stonde"; 1519, *Churchwardens' Acc. St. Giles, Reading*, "For halpasis to the Awters"; 1548, *Hall Chron.*, "On the aultare was a deske or halpace"; 1577-87, *Holinshed Chron.*, "On the altar an halpas . . and on the same halpas stood twelue images." The last quotation anyway refers clearly to the reredos, which under the designation "halpas" would appear to have been sometimes a kind of cupboard; and sometimes the front of the halpas was covered by a frontal. Here, then, is a step, high or low, giving the shelf upon which images stood, as on the stone shelf at Clapton-in-Gordano. The custom of placing candles and flowers on a gradine, generally low, seems to have been a development. The genesis of ideas in which the design originated is a matter of importance in tracing developments, and the relation of derivation between designs in different materials is not less interesting. Sometimes, as in transeptal chapels, wall arcading would have afforded a reredos ready for hanging with cloths or decoration; a surface arcade such as that in Westminster Abbey might be instanced. Dart states that at the altar of St. Andrew and St. Lawrence silver candlesticks were placed in the windows over them. What was done in the Abbey may have been done in other churches; for instance, candlesticks may have been placed on a window ledge, as at the top of the low reredos at Hanwell, Oxford, of which an illustration is given in Mr. Bond's book. In relation to the altar beneath, the section of wall below the window ledge and above the altar would be akin to a high-step or halpas. With candles and images, garlands or other garnishings might have been placed on the ledge or shelf for *vesta*, the altar lights standing on the *mensa*. The custom of placing flowers and candles on a gradine need not be condemned, although unfortunately gradines so furnished have been, and still are, frequently introduced in churches either new or old with little thought, knowledge, or understanding, and with results lamentable from an æsthetic standpoint.

The halpas has introduced the cupboard, which

recalls noteworthy entries in the Fabric Accounts of Wells Cathedral commented upon in the introduction to the second volume of the Manuscripts of the Dean and Chapter inspected and transcribed by the Royal Commission, to which a reference would have been desirable, though Mr. Bond's book is so well filled. Briefly, there were at Wells Cathedral eight or nine "cawctes," a curious word (it occurs elsewhere than in the accounts) which has not been traced in any dictionary or glossary. There were two in the choir, behind the high altar, and another behind the high altar to keep graduals and books in; one at St. John's altar, one at St. Stephen's altar, and one in the treasury. It is held that the two behind the high altar were probably wooden cupboards, presses, or ambries for the keeping of relics, plate, etc., and were very probably similar to the beautiful specimens of fifteenth century woodwork destroyed in the disastrous fire at Selby Abbey church in 1906. The Communar, the Escheator, and the Clerk of Blessed Mary each had one also, which, it seems clear, were something different and not mere ambries; certain details have suggested something in the nature of wooden enclosures, parcloes, forming small rooms.

The very interesting chapter on Ambries, which does not refer to the halpas (nor is the term found in the book), leads up to the Sacrament House, a study in itself, and one feels impelled to read over and over again all that Mr. Bond has brought together, illustrated by those beautiful engravings by Jewitt of beautiful examples in Scotland, and others. He mentions a notable example, in alabaster, designed after ancient tradition with a very lofty canopy, 52 feet in height, in the church of Léau, near Tirmont, with bowls and prickets for lights and tapers at the base, referring to a cast of it in the South Kensington Museum. In the Museum besides, it would have been well to add, are comparatively small but valuable originals, such as the traceried tabernacle (or shrine) in oak of French fifteenth-century workmanship, and Florentine or Tuscan panels of the late fifteenth century carved in relief, with matrix for tabernacle safe—one in sandstone and two others of marble; another example retains the engraved and gilded metal door. There is also a small marble tabernacle of architectural design of the early sixteenth century from Fiesole. Manifestly reference to foreign examples is necessary.

Very beautiful work shown in choice photograph reproductions illustrates the account of the Easter Sepulchre. The only part to which exception might be taken is the description from a satirical work of Thomas Naogeorgus, as rendered into English verse by Barnabe Googe in 1570, of the Good Friday and Easter Day ceremonies, although "cut," apparently by Bloxam. This, of course, conveys little impression of great devotion and reverence, and takes the space of nearly one page. Mr. Bond states that sometimes watchers were paid on the strength of entries merely giving items of subsistence. Had he spoken first of the

devotional ceremonies, the watch kept from Good Friday to Easter Day would have been accounted for, whereas commencing with the watch he partially explains it in a sense not as commemorative of the fundamental Easter truth. The Paschal Candle inaptly referred to draws a long footnote of explanation, quite outside, one would suppose, the scope of the book.

The general characteristics of structural reredoses up to the end of Gothic times only are considered. All that is said calls for very attentive reading with frequent reference to photograph reproductions: many of them illustrate more than one of the leading features in types classified, and all contribute to a collection representing beautiful work exhibiting the wonderful power and versatility of mediæval craftsmen. Reference to seventeenth century reredoses and to Wren's altar pieces is wanting. Eighteenth century reredoses of classic design are dismissed with a reference to an illustrated example in Oxhey (printed Orcheston) Chapel near Watford, showing an altar-piece which might be of late seventeenth century date; the letter-press dates the example 1612. Evidently it was found impossible within limits of space to deal with Renaissance work other than the communion table and altar rails. The photograph of Gwydyr Chapel, Llanrwst, attributed to Inigo Jones,* is one of many utilised to illustrate the communion table, which is brought well into the eighteenth century with illustrations of those in Halesworth Church and St. Stephen's, Walbrook. Altar rails, of course, are of design and workmanship later than Gothic, and the subject is well illustrated and discoursed upon in a chapter full of history allied to that of the communion table.

Perhaps in the future Mr. Bond may be able to illustrate something of efforts to dignify the altar in England after Gothic times. In 1709-10, as the accounts of Wells Cathedral show, a payment was made to Mr. Thomas Fry "for his work in new gilding the starrs, cleansing the gold cornish atop, and new painting with blue the canopy of the altar, round about over the hangings there," which indicates the maintenance of this feature at a date much later than instanced by Mr. Bond.

A great number of eighteenth-century wooden reredoses of classical design, as Mr. Bond remarks, all of historical interest as permanent evidence of the continuity of the life of the Church of England, and many of good design, have been destroyed at recent "restorations," and, it may be added, in "restorations" that were not quite recent. It is possible to preserve a classic reredos, or a reredos of any other design, when on account of absolute unsuitability it may be considered impossible to keep it *in situ*. It is a question sometimes how far this generation ought to go in the direction of leaving things exactly as they are. Few indeed must be the number of churchmen who regret some altera-

tions that have been made in order to obtain a proper sanctuary for the altar. Inappropriate surroundings at the beginning of Queen Victoria's reign were conspicuous in Christ Church, Albany Street, St. Pancras, consecrated in 1837, the first church towards the erection of which a contribution was made from the fund created under Bishop Blomfield's scheme to build fifty churches in London. "The first object which met the eye on entering was certainly not the altar, that being on a level with the floor, but the organ loft (above the altar), which was fronted with red curtains. There was nothing which the most imaginative could have called a chancel. The church was pewed throughout, with the exception of a row of free seats in the centre passage, and some five or six similar rows at the commencement of the side aisles. There were then, as now, galleries." The choir-boys were in the organ loft over the altar, and round the altar below were charity girls in mob caps, white tippets, and yellow mittens. There was a clerk in a black gown under a reading desk on the opposite side to the pulpit, and there were pew openers in neat caps. St. Paul's, Knightsbridge; St. Barnabas', Pimlico; St. Andrew's, Wells Street; St. Mary Magdalene's, Munster Square; St. Alban's, Holborn; All Saints', Margaret Street—London churches, all now looked upon as of a certain age, were not then built. The gain in 1843 of an ample altar recess with triumphal arch was the first alteration effected at Christ Church, St. Pancras, by Carpenter, who removed the organ to the west gallery and erected choir stalls. Butterfield added decorations near the altar and enlarged the choir stalls in 1853; and again, in 1865, enlarged the choir stalls on a bolder plan, raising them one or two steps above the church level, and later still Butterfield beautified the sanctuary. It may be that in years to come some will regret the destruction of the fantastic original north (ritual east) end.

A statement that the old "three-decker" originated in Italy has lately been read somewhere in print, but it never could have had the position in the middle of the church to block out the view of the altar, as in England frequently up to the time of the Oxford movement—a survival of a monstrous fashion of a date previous to the erection of the Albany Street church. That aperture which, Mr. Bond reminds us, the Camden Ecclesiological Society preferred to call a hagioscope, afforded a view of the high altar right through necessary piers and walls, and is dealt with in a chapter furnished with special plans and illustrations.

The reader will find most interesting chapters, all well illustrated, on the Houseling Cloth, Piscina, Sedilia and Credence. The history of the altar with which the book commences is somewhat better known.

An appendix of four pages explains the Holy Water Stoup, with a full-page photograph reproduction showing an example with canopy of Renaissance design in Brittany with a devout old lady in the act of making the sign of the Cross—a beautiful picture;

* This matter was dealt with in an article on "Inigo Jones in History and Tradition" (JOURNAL R.I.B.A. 31 August 1912).

Prout would have been delighted with the subject. A footnote puts on record a fact with which few churchmen are acquainted. Even so, for the sake of completeness the pages might have been devoted to re-references of the seventeenth and eighteenth centuries; and likewise two whole pages which are devoted to illustrations of a late Spanish retablo.

An important result of a perusal of the book is the right impression it conveys of the necessity of sound understanding of the evolution of Christian worship, and the desirability of some liturgical knowledge, for the study of ecclesiastical antiquities.

HARRY SIRR [F.].



9 CONDUIT STREET, LONDON, W., 24th June 1916.

CHRONICLE.

The Ministry of Munitions and the Control of Building Operations.

The very serious shortage of labour for the completion of munition factories and other work urgently required for war purposes has made it necessary temporarily to secure some measure of control over the volume of private undertakings that are not of pressing and immediate necessity in order to obtain the labour required.

The Ministry of Munitions, with a view to causing as little disturbance as possible, and to ensure that all facilities are given for the safety and protection of buildings in progress, has invited the President of the Institute, Mr. Ernest Newton, A.R.A., to assist it—in a voluntary capacity—where technical difficulties of this kind occur.

No action is now taken in connection with a work in progress until it has been inspected and reported on and careful consideration has been given to all the circumstances. In many cases it has been found possible to advance the work a stage or to complete it altogether.

All decisions are in the hands of the responsible authorities, but Mr. Newton's presence at the Ministry is a guarantee that nothing that can possibly be done—having regard to the urgent requirements of the State—to safeguard the interests of all connected with the building industry will be neglected.

The R.I.B.A. Record of Honour: Thirty-first List.

The following is the Thirty-first List of Members, Licentiates, and Students R.I.B.A., serving with the Forces, the total to date being 63 Fellows, 451 Associates, 260 Licentiates, and 279 Students:—

FELLOW.

Hall, H. Austen: Sub-Lieut., R.N.V.R. (attached to R.N.A.S.)

ASSOCIATES.

Asman, H. W.: Royal Engineers.

Brooker, A. E.: Royal Naval Air Service.

Capper, Major S. H., has been on active service since mobilisation in August 1914, and holds the position of Military Censor in Charge at Alexandria.

Clarke, W. T.: West Lanes. R.E. (Fortress).

Comyn, Heaton: Artists' Rifles.

Dowdeswell, Frank: 2nd Lieut., Royal Engineers.

Durrant, A. M.: 2nd Lieut., Royal Engineers.

Gea, Ernest: Artists' Rifles.

Hughes, H. Harold: Anglo-French Red Cross.

Newnum, E. G.: Lieut., R.N.V.R.

O'Connor, D. M.: London Univ. O.T.C.

Owen, C. B.: Lieut., 9th F.A. Bde., Australian Force.

Ripley, C. G.: Lieut., A.S.C.

Russell, A. L. N.: 16th Bn. Middlesex Regt.

Russell, R. T.: Indian Army, 2/9th Gurkhas.

Wade, F. W.: Royal Engineers.

LICENTIATES.

Armstrong, C. M. C.: 2nd Lieut. 3/1 Warwickshire Yeomanry.

Cummings, V. J.: 10th Field Artillery Bde., C.E.F.

Lloyd, B. M.: Bankers' Bn. Royal Fusiliers.

Malcolm, A. N.: Royal Engineers.

Houston, J. A. T.: Lieut., Royal Engineers.

STUDENTS.

Pallett, G.: Royal Engineers.

Rose, G. A.: Royal Garrison Artillery.

Promotions.

Mr. R. S. Wilshire [A.], Artists' Rifles, to be 2nd Lieut.

King's Royal Rifles: Architects' Company.

Arrangements have been made for the formation of a Company of Architects and Surveyors in connection with the 22nd (Res.) Battn. King's Royal Rifles. Lieut. and Quarter-Master H. G. James (with the permission of the Commanding Officer, Lieut.-Col. L. Whitehead) has the arrangements in hand, and members desirous of joining should communicate with him at Norfolk House, Laurence Pountney Hill, Cannon Street, E.C. It is necessary to make immediate application. The duties of the Battalion are largely in connection with field engineering. The training ground is at Wimbledon.

23rd Battalion London Regiment and Married Architects.

The President, Mr. Ernest Newton, A.R.A., writes: "My son, who is Adjutant of the 23rd Battalion London Regiment, writes to me from France to say that his Commanding Officer is very pleased to hear that married architects have been invited to enlist in this Battalion, and that they may be sure of a hearty welcome should they come to France."

The Blot on the Thames.

In an article on the Charing Cross Bridge Bill in the last issue of the *JOURNAL* Mr. W. R. Davidge briefly summarised the proceedings before the Committee of the House of Lords sitting to hear evidence on the Bill. Some interesting details of the evidence were given by Sir Aston Webb, R.A., Chairman of the Joint Committee opposing the Bill, in an article headed "The Blot on the Thames" in the *Observer* of the 11th inst. Sir Aston says:—

The principal witness for further consideration was Mr. John Burns, who said he looked upon the bridge and station as an abomination which should never have been permitted, and that he thought everyone, including the Company, would welcome its disappearance to the Southern side. His view was that we ought to have a new station on the Surrey side, with a new vehicular bridge of the finest description connecting the North with the Surrey side, and that the L.C.C., the two adjoining Borough Councils, and possibly the City Corporation, ought to co-operate in providing it, and whilst carrying out a great public improvement, not to the Company's detriment, but for the benefit of London as a whole, the Thames might be relieved of that ugly red oxide Behemoth that sprawls from North to South. If the Bill were postponed for two or three years he and others, he said, would do all in their power to get the various authorities concerned to consider their attitude towards an alternative to this bridge, and suggested that the L.C.C. should co-operate with the Railway Company at once in devising a more excellent way of a bridge here and a station on the Surrey side.

Another witness, Mr. Andrew Taylor, Chairman of the Improvements Committee of the L.C.C., said that while, of course, he could not pledge his Council, his Improvements Committee and the Council were unanimous—there being no dissentient vote—in deciding to oppose the Bill, and therefore he would take it upon himself to bring the matter forward, so that he might get authority to communicate with all the bodies concerned, together, he hoped also, with the Government and the Railway Company itself. In his opinion the time is now much more ripe than it has ever been for devising such a scheme. All he asked was that he should have a reasonable time after the war to bring their scheme to a focus.

A third witness, Sir William H. Lever, said he felt merely as a business proposition it was an entire mistake to spend money on the Charing Cross Bridge, not only from the point of view of the public but also of the Railway Company. Land on the South side of the river is bound to become more and more valuable and more difficult to acquire. The proper and economical way is for the Company to acquire it at once. He was perfectly certain that it is impossible to have an adequate station for Continental traffic on the restricted site of four acres at Charing Cross, and in his opinion we were quite behindhand in station accommodation in this country. He felt that any money spent, large or small, in patching up the present bridge was practically futile. In his view it was essential to have another road bridge at this point. The congestion of traffic in London is accountable for the extraordinarily high rates for cartage in London, which are at least three times that of the dearest town he knew of.

The only other witness called under the instruction was myself, though we had in attendance, and would have liked to call on the traffic and other requirements, Mr. Paul Waterhouse, who has made a speciality of this matter, also Professor Beresford Pite, and Mr. Leonard Stokes, on behalf of the Westminster Borough Council.

In Mr. Paul Waterhouse's view the intention to strengthen Charing Cross Bridge as proposed is wholly to be condemned. During its entire existence it has been an acknowledged blemish and is a definite and appreciable discount to the worth of our town. He considers the removal of the station and bridge inevitable, and that the congested state of existing road bridges demands a vehicular and foot traffic bridge at this point. The inefficient gangway attached to the north-east side of the bridge is itself an anachronism and calls for reform,

and the narrow footway and makeshift staircases should not be tolerated.

Professor Beresford Pite, of the Royal College of Art, holds similar views. He points out that a public bridge at this point would shorten the distance from Trafalgar Square to Waterloo by more than a third of the present distance by roadway, and that the North and South sides of London at its heart are separated by a great and exceptional length of unbridged river, that the retention of the present railway bridge makes such a junction of the North and South impossible, and that any money spent upon rendering permanent a structure which prevents the economic development of the South side is money badly spent. In his opinion the bridge discredits its unique position and is an architectural disgrace to London, and does no honour to engineering design. He quotes Mr. A. J. Balfour, who on 2nd May 1892, speaking at a Royal Academy banquet, said: "I never walk along the Thames Embankment and study the proportions of Charing Cross Railway Station and the bridge which is appended thereto without feeling how monstrous it is that such things should be allowed, and that there should be no power of dealing with them."

In my own evidence I urged similar views, that the bridge and station were entirely unworthy of their position, very unsightly and so poorly designed that the station roof has already fallen down, and a large sum is now asked for in order to strengthen one-half of the bridge. It seems impossible to make anything worthy of the present structure by patching it, and it is certain that no worthy improvements can take place at this most important point if the present bridge is retained, as it certainly will be if a large sum of money is now expended upon it. I gave it as my opinion that a new road bridge at this point is essential, and that it would be an immense advantage. The Chairman of the Committee said he thought they were all agreed upon that, and he did not think there could be any question about it, and Lord Grimthorpe, another member of the Committee, said: "I think we should all like to abolish the bridge if we could." A suggestion for a new bridge prepared by Mr. Niven and Mr. Raffles Davison can now be seen at the Royal Academy.

In the end, however, their Lordships passed the preamble of the Bill, and London is again threatened, unless it rouses itself at once with a renewed life, for this "oxide Behemoth" is a permanent hindrance to all improvement in this the very eye and centre of London. One wonders whether London as a whole will ever gain control over its own affairs. Here we have a shaky old railway bridge, condemned by the various authorities controlling the different interests of London, retained solely at the wish of a railway company. Sir Lionel Earle, the Permanent Secretary of the Office of Works, well put it when he said it is regrettable that Parliament does not give power to some authority to deal with these questions on the aesthetic side. He thought we were practically the only country in Europe of any importance that has no machinery of this sort, with the consequence that London is constantly plastered with things that do great discredit to the importance of the town.

The fact that we are at war is surely no reason why we should allow money to be spent on such eyesores as this bridge. And what shall we say to those who are fighting for us when they return and ask for an account of our stewardship? Will they not expect us to see in their absence that the new London—which we all hope for, and is slowly, but surely, in the process of creation—is not made impossible by the retention of a monstrosity like this bridge, and that we should make up our minds to approve of nothing at this point which would make impossible when peace comes the erection of a really magnificent bridge as a memorial to those who have fallen, as Waterloo Bridge was erected at the beginning of last century. Let us then provide for a bridge wide enough to take the traffic of centuries, strong enough to stand for all time, and beautiful enough to be a joy to succeeding generations.

Letters from Mr. Reginald Blomfield, R.A., Mr. Ernest Newton, A.R.A., Professor W. R. Lethaby, and Mr. Wm. Woodward, all strongly supporting Sir Aston Webb's views, were published in the *Observer* of the 18th.

Petition against Charing Cross Railway Bridge Bill.

The Royal Institute and the London Society have lodged a joint Petition in the House of Commons against the Charing Cross Railway Bridge Bill, praying to be heard by counsel, &c. The Petitioners urge that the present railway bridge is an eyesore which should be removed at the earliest possible date. No strengthening or alteration can make it worthy of the position it occupies. Important bodies like the London County Council have had under consideration for some time the desirability, from the point of view of traffic considerations and amenity, of the removal of Charing Cross Station to the south side of the river and the provision of a road bridge with adequate approaches from the Strand and Trafalgar Square. The time must come when the station will have to be removed, and the proposals of the Bill will put serious obstacles in the way of its realisation and tend to increase the compensation which the Company will no doubt claim when the road bridge is to be provided. The Company are practically seeking to obtain Parliamentary sanction to the continued existence of the present bridge, thus making it more difficult to secure the substitution for it of a road bridge. The Petitioners point out that by the South-Eastern, &c., Railway Act of 1900 the Company were empowered to widen the bridge and the station, and in consideration of these powers they were required to set back the courtyard of the station abutting on the Strand and also to sell to the London County Council certain property so as to enable the Council to effect the much-needed widening of the Strand at this point. The Petitioners apprehend that if the Bill is passed and the Company strengthen their present bridge, they will find that all the requirements of their traffic are met and they will allow the powers obtained under the Act of 1900 to lapse, and consequently the conditions respecting the widening of the Strand, which will depend on the widening of the station being carried out, will also lapse. The Petitioners strongly object to the Company being allowed to escape the obligations imposed on them by the Act of 1900, and submit that the powers of strengthening the bridge sought by the Bill should, if granted, only be granted on condition that the widening of the Strand provided by the Act of 1900 be first carried out. The Petitioners submit that there is no urgency for the Bill to become law this Session. The Company seek by their Bill seven years for the completion of the alteration and strengthening of the railway bridge, but it has been admitted that they have no intention of carrying out the work until after the War; they will therefore suffer no injury by the Bill being rejected now and having to come to Parliament after the War for the powers now sought. It is also pointed out that while the Petitioners and others are not relaxing their efforts to secure improvements, including the removal of the station and the substitution of the road bridge for the railway bridge, such schemes can only be promoted by the local authorities of London having powers of rating and borrowing

money, and it would be useless for those authorities to promote any scheme until after the War. The Company therefore should not be allowed to take advantage of this position of affairs and have the powers they seek granted to them this Session.

Civic Survey Exhibition.

The Civic Survey of Greater London, whose work is being carried on in the R.I.B.A. Galleries, arranged in conjunction with the Civic Surveys of South Lancashire and South Yorkshire an interesting Exhibition of Plans and Drawings in connection with the Conference on "Sanitary Administration under War Conditions" held at the Royal Sanitary Institute in Buckingham Palace Road on the 9th and 10th June. The exhibits represented the work of the respective Surveys, and dealt with such subjects as the Physical Characteristics of certain districts, Surface Utilisation, Various Administrative Areas, Traffic, Vital Statistics, &c. The Exhibition aroused considerable interest.

OBITUARY.

Colonel Edward Appleton, who died on 19th May, was elected a Fellow of the Institute in 1861, and was placed on the List of Retired Fellows in 1906. Born at Stockwell in 1832, he was articled to Mr. R. Dixon, of Guildford, and started in practice at Torquay in 1861. He was architect to the Cary Estate, and designed most of the houses on the estate. He also practised as an engineer, and carried out a great many sanitary engineering schemes for water supply and main drainage. He was elected an Associate of the Institution of Civil Engineers in 1863, and a Member in 1888. He was very active in the development of Torquay, and was a Borough magistrate, a member of the Town Council and of many of the committees, and took a great interest in the Technical Schools and Science and Art School. Colonel Appleton was an ardent Volunteer, and in 1861 was instrumental in forming the Engineering Corps, with which he was connected for 35 years, retiring in 1896 with the rank of Colonel and receiving the V.D. He retired from practice in 1905 through failing eyesight.

THE EXAMINATIONS.

The Final: Alternative Problems in Design.

Instructions to Candidates.

1. The drawings, which should preferably be on uniform sheets of paper of not less than Imperial size, must be sent to the Secretary of the Board of Architectural Education, Royal Institute of British Architects, 9 Conduit Street, W., on or before the dates specified below.

2. Each set of drawings must be signed by the author, AND HIS FULL NAME AND ADDRESS, and the name of the school, if any, in which the drawings have been prepared, must be attached thereto.

3. All designs, whether done in a school or not, must be accompanied by a declaration from the Student that the design is his own work and that the drawings have been wholly executed by him. In the preparation of the design the Student may profit by advice.

4. Drawings for subjects (a) are to have the shadows projected at an angle of 45° in line, monochrome, or colour. Drawings in subjects (b) are to be finished as working

drawings. *Lettering on all drawings must be of a clear, scholarly, and unaffected character.*

Subject XXVIII.

(a) **THE HALL AND STAIRCASE TO A NATIONAL MUSEUM.** The Hall to be 38 feet wide. The inner swing doors and screen to be shown, but not the outer part of the Entrance. The height of the main storey to be 20 feet from floor to floor. Four steps in the Hall to lead up to the main floor level.

Doorways to galleries on either side and access to galleries at back of staircase required. Top light to the staircase. Openings on first floor looking into the hall or stair or both if desired.

Drawings.—Two plans and two sections to $\frac{1}{2}$ -inch scale and details to $\frac{1}{4}$ -inch scale.

(b) **A SMALL COUNTRY HOUSE TO COST £1,500.** To stand in ground 200 feet frontage on the south-west of a country road and 300 feet deep. The view is to the south and the ground slopes 1 in 25 to the south-west.

Accommodation required.—Dining-room, good drawing-room, loggia or verandah, kitchen, small housemaid's pantry, etc.; four bedrooms, bathroom, three w.c.'s.

Drawings.—Two plans and roof plan, section and elevation to $\frac{1}{2}$ -inch scale required. Block plan of the whole site, scale 32 feet to an inch.

The student is to cube out the building, showing how he arrived at the cubes, and to price it.

Subject XXIX.

(a) **A MAUSOLEUM to the memory of a Shipowner and his family.**

To be placed on a plot of ground 24 feet by 20 feet and to be simple in treatment and to cost about £1,000. Wall spaces for inscriptions. Vault not to be shown.

Drawings.—Plans, full section and one or two elevations to $\frac{1}{2}$ -inch scale and detail of some part to a larger scale.

(b) **A CHAPEL to a TWO-STORIED SUBURBAN INFIRMARY.** To hold 150 patients and staff altogether. Entrance from the main corridor of the building on both floors.

Drawings.—Two plans, section and two elevations required to $\frac{1}{2}$ -inch scale, and details to $\frac{1}{4}$ -inch scale.

Subject XXX.

(a) **A PAVILION AND ORNAMENTAL POOL, ETC., at the end of a lake in a park.** The total space to be dealt with to be about 300 feet square and 4 feet above the surface of the lake.

Drawings.—General plan to $\frac{1}{8}$ -inch scale, elevation and details to a suitable scale to explain scheme.

(b) **A TIMBER AND LEAD LANTERN ON THE ROOF OF A HALL 40 FEET WIDE,** the ridge of the roof of which is 40 feet from the ground. The lantern to be about 11 feet wide.

Drawings.—Plans at various levels and the necessary sections and elevations to $\frac{1}{2}$ -inch scale. All construction to be shown, including the trusses to carry the lantern. Any details to a larger scale that may be desirable.

Dates for Submission of Designs in 1916-1917.

	Subject XXVIII.	Subject XXIX.	Subject XXX.
United Kingdom	31st Aug.	31st Oct.	30th Dec.
Johannesburg	31st Oct.	30th Dec.	28th Feb.
Melbourne	30th Nov.	31st Jan.	31st Mar.
Sydney	30th Nov.	31st Jan.	31st Mar.
Toronto	30th Sept.	30th Nov.	31st Jan.

MINUTES.

At a General Meeting (Ordinary) of the Session 1915-16, held Monday, 19th June 1916, at 4 p.m.—Present: Mr. Ernest Newton, A.R.A., *President*, in the Chair; 38 Fellows (including 16 members of the Council), 12 Associates (including 2 members of the Council), and several visitors—the Minutes of the Meeting held 5th June having been published in the JOURNAL were taken as read and signed as correct.

The Hon. Secretary having referred to the tragic deaths of Field-Marshal Lord Kitchener, *Hon. Fellow*, and Sir Hay Frederick Donaldson, *Hon. Associate*, and recalled the personal services each had rendered to the Institute [see p. 261], it was resolved that the General Body do record its sense of profound sorrow at their loss, and that a message expressive of its sincerest sympathy and condolence be addressed to their relatives.

The Hon. Secretary announced the decease of Edward Thornton, of Calcutta, elected Associate in 1892, Fellow in 1904; and Ernest Willmott, elected Fellow in 1906.

Mr. Habib Basta, *Associate*, attending for the first time since his election, was formally admitted by the President.

The Secretary announced that the Council had reinstated Mr. Charles Ernest Lawrence, of Newport, Mon., as a Licentiate of the Royal Institute.

The President delivered an Address on the Presentation of the Royal Gold Medal to Sir Rowand Anderson, LL.D., F.R.S.E. [F.], and in the absence through illness of Sir Rowand the Medal was handed to the Right Hon. Sir Robert Inches, Lord Provost of Edinburgh, who accepted it on Sir Rowand's behalf and undertook to deliver it to him.

An Address by Sir Rowand Anderson in acknowledgment of the honour was read by Mr. A. Lorne Campbell [F.], Past President of the Edinburgh Architectural Association.

On the motion of Sir John Burnet, R.S.A., LL.D., *Vice-President*, seconded by Mr. J. Alfred Gotch, F.S.A., *Vice-President*, a vote of thanks was passed by acclamation to Sir Robert Inches for his attendance at the Meeting.

Sir Robert Inches having responded to the vote, the proceedings closed and the Meeting separated at 5 p.m.

NOTICES.

Licentiates and the Fellowship.

The next Examination of Licentiates desiring to qualify for candidature as Fellows will take place in January, 1917. Applications for admission to the Examination must be sent in by the end of the current year. Full particulars may be had on application to the Secretary, R.I.B.A.

Arts and Crafts Exhibition Society.

The Autumn Exhibition of the Arts and Crafts Exhibition Society in the Galleries of the Royal Academy will be open to all craftsmen, whether members of the society or not, and works will be received and exhibited under conditions similar to those of the Summer Exhibitions at the Royal Academy. The address of the Secretary, Professor E. S. Prior, A.R.A., is 1 Hare Court, Temple, E.C.

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A HISTORY OF ARCHITECTURE.

A History of Architecture. By Russell Sturgis and A. L. Frothingham. Vol. III : Gothic in Italy, France and Northern Europe. Vol. IV : Gothic in Great Britain ; Renaissance ; Modern Architecture. La. 8vo. New York, 1915. 25s. net each vol. [Doubleday, Page & Co., New York ; London Agents, B. T. Batsford, Ltd., 94 High Holborn.]

THE late Mr. Russell Sturgis had intended to write a comprehensive history of architecture down to the present day, but only lived to finish the first two volumes. The two handsome volumes now issued complete the work. Mr. Frothingham deals with the rise and development of Gothic in France, southern and northern Europe ; and proceeds in the fourth and concluding volume to a study of Gothic in Great Britain, the Renaissance and modern architecture. A universal history of architecture is a stupendous subject, and the man who sets out to write it must possess dogged industry, first-hand knowledge both of the science and art of architecture, rare powers of selection and classification, and, if his work is to be readable, more literary skill than is usually possessed by working artists. Architecture differs from the other arts in that, though it is perfectly free in regard to individual expression, it is subject to the laws of statics and dynamics, and to practical conditions which differentiate it from arts whose sole and essential function is the expression of emotion. Ruskin, for example, most eloquent and suggestive in dealing with the art of painting, became a merely exasperating moralist in dealing with architecture, because all he saw in it was its detail, and he was wholly ignorant of building. Viollet-le-Duc, on the other hand, built up a vast hypothesis of "scientific" construction as shewn in mediæval architecture on an extremely limited basis of facts. Fergusson's work was far more solid, but he had peculiar views, and though his criticisms were often shrewd, his style was arid and unattractive, and he was not a practising architect. The nearest approach to a scientific History of Architecture is that written by the late Auguste Choisy, an extremely able work, but, it must be confessed, terribly stiff reading. The pitfalls that lie in wait for the historian of architecture are sentimentalism and the wrong sort of archæology, or on the other hand a too rigid scientific method which overlooks the essential fact that, whatever the laws which govern its technique, architecture is an intensely individual art for those who have the eyes to see it.

Mr. Frothingham's account of French Gothic is very complete—nearly all the important churches of France are illustrated by photographs and diagrams from Viollet-le-Duc, Choisy, and others. He brings us along through the gradual developments of detail, vaulting, fenestration, piers, and so on ; the illustrations are well selected and clearly explained, for Mr. Frothingham possesses a lucid and readable style, and the attentive student can easily follow the thread of his argument. There are, however, some material points on which some of us will differ from him. He holds strongly to the "scientific" point of view in regard to Gothic architecture—that is, he believes that the Gothic builders worked on conscious, deliberate, and considered lines, and that the basis of Gothic was "mathematical." He believes that Gothic architecture had "a canon of building proportion just as

truly as Greek sculpture," and for this he relies on Mr. Goodyear's photographs and researches in certain optical refinements of French Gothic and other evidence as to the use of the triangle and the circle; indeed, he need have gone no further than plates 35, 37 and 42 in the Album of Villard de Honnecourt (reproduction) for evidence that mediæval artists often amused themselves with the application of these rudimentary diagrams to the human figure and to buildings. In Fra Giocondo's edition of Vitruvius (1510 and 1513), book 3, figures are shewn in squares and circles, and in Albert Durer's treatise on the symmetry of the human figure various methods of setting it out geometrically are given; indeed, it was a favourite amusement of ingenious and speculative persons of the time. But evidence such as this by no means warrants the theory that mediæval builders set out their buildings on "a mathematical basis," or, in fact, proceeded on any other methods than those of highly trained and experienced masons, who passed on their traditions of workmanship from father to son. Mr. Frothingham, speaking of Beauvais, says it is "quite clear that its instability was not due to any carelessness, or lack of scientific knowledge on the part of the architect"; but in his next sentence he supplies the answer to his own assertion: "It was necessary for someone to experiment in order to determine the limit of safety; the architect cast himself into the breach for the sake of his art." But if the architect had possessed exact scientific knowledge of the precise thrust of his vaulting, he could have calculated his counterpoise to an ounce; there would have been no need for an experiment at all. Beauvais, in fact, is the irrefutable proof that the mediæval builders, skilful as they were, did not in fact possess scientific knowledge of building. In earlier Gothic they allowed an ample margin of strength, or factor of safety, as we should call it. But as the skill of the masons in stone cutting advanced, they came to rely on it alone, and their consummate stonework ended in the catastrophe of Beauvais. The French master-masons (whom Mr. Frothingham persists in calling architects, when they were in fact builders) in the fifteenth century were perhaps the finest stone-cutters there have ever been; but it is against the facts of history and of their actual buildings to credit them with scientific knowledge of building. Martin Chambiges, whom Mr. Frothingham styles "architect of important works of this age" (late fifteenth century), is a case in point. He was called in at Beauvais in 1506, but his work did not stand fifty years, for the date on the south transept window is 1550, and on the first bay of the choir, east of the crossing, 1575.* Mr. Frothingham describes a highly interesting discovery of the original model of the Church of St. Maclou at Rouen, but I am unable to find the plate of it to which he refers.

His account of domestic architecture in France is less complete than that of ecclesiastical. I find no mention of such very complete and typical houses as Martainville (1483), or the Manoir d'Ango, near Dieppe; and too great reliance has been placed on Viollet-le-Duc's restorations. There is a certain metallic wiry quality about these drawings, what Americans might call "slickness," which leaves those who have studied these old buildings on the spot quite unconvinced. Mr. Frothingham's survey of Gothic in Spain, Portugal, and Italy is able, though of necessity somewhat cursory. He hardly does justice to the striking effects of light and shade attained in some of the Spanish cathedrals, such as Barcelona; but in all these countries Gothic architecture, as compared with that of France, always seems derivative, and spoilt in the derivation. This is particularly the case in Germany, where infinite ingenuity fails entirely as a substitute for genius. Mr. Frothingham does much less than justice to the Gothic of the Netherlands, and more particularly of Holland. There are few finer Gothic towers anywhere than that of the great church at Veere; and the tower of Leeuwarden Church, a splendid solitary fragment of the fourteenth century, will compare, both in its mass and its crispness of detail, with any tower of the same date in France or anywhere else.

Mr. Frothingham's appreciation of English Gothic is sane and level-headed. He sums it up in

* I have discussed the question of the master-builders at length in Vol. I, Chap. 2 of my *History of French Architecture*.—R. B.

the opening sentence of his second volume : " An exceptional position is taken by England. She is a splendid second to France in the race for honour, leaving other countries hopelessly distanced," and he points out that England worked out her Gothic her own way and as her own expression of herself. He does not appear, however, to have studied our most learned authorities on the subject, such as Willis among the older writers and Professor Prior among contemporaries ; and his concluding remark in reference to military architecture, that its interest is " more historic than artistic," will seem somewhat unfortunate to those who regard architecture as the art of building.

Mr. Frothingham's transition from Mediæval Architecture to Renaissance is somewhat abrupt and unsatisfactory. Except in Italy, it was far more gradual and tentative than is generally supposed. In Italy the change was due to two causes, the Italian instinct for Classic rather than for Gothic, and far more to a factor of world-wide importance, to which Mr. Frothingham scarcely refers, the influence of the Humanists. From Alberti to Michelangelo, all the great Italian architects were intensely keen students of the remains of ancient Rome. They very ably interpreted the ideals of such men as Politian, Pico della Mirandola, and Lorenzo di Medici ; and the more one studies their works the more one realises how completely they were steeped in the study of antiquity. From Italy this enthusiasm spread to other countries, notably to France, and, finally, to England. In both the latter countries the Gothic instinct was deep-rooted and tenacious, but the master-masons had fallen from their high estate, they had lost their cunning and had become merely unscrupulous tradesmen. De l'Orme was unmeasured in his denunciations of their incompetence, and Mr. Frothingham is wrong when he denies that the Renaissance in France was due to the final impotence of Gothic. Whether one liked it or not, a change was inevitable under the altered conditions of life. Mr. Frothingham's account of the Italian Renaissance is interesting and very fully illustrated, but lacks clearness. It is difficult to see the wood for the trees, and in a very complex subject such as this it is better to lay down broadly the main lines with a few well-selected instances to illustrate the principle of classification, rather than to attempt to include all the famous buildings and all the known architects. I find the same difficulty in the account of the Renaissance in France. Here we have details of ornament of every kind, but very little about architecture ; and the arrangement of the illustrations is somewhat confused, a seventeenth-century portico (wrongly described as Barocco), at the Hôtel de Caulet at Toulouse, suddenly appears among sixteenth-century details ; and Chambiges appears in the company of Bullant and De l'Orme. Nor is the account of Martellange and of the rise of Jesuit architecture in France at all accurate. Its origin and development in France is quite different from what is suggested in Mr. Frothingham's very summary reference ; and to find the barbarous design of the Hôtel de Ville of La Rochelle described as " a splendid piece of Barocco " under Henri IV is, to say the least, bewildering. The building was begun under Henri II, it is not Barocco, nor does it at all represent the characteristic architecture of Henri IV. It was just an ambitious attempt of some sixteenth-century designer to catch the fashionable manner somehow. (I may mention that it was restored with ferocious thoroughness by Lisch about forty years ago.)

But my most serious criticism of Mr. Frothingham's history is that he appears to me to have entirely missed the meaning of Renaissance architecture as handled by the French, and, indeed, by other people ; for he regards the Renaissance as an isolated chapter of architecture which began in the sixteenth and ended in the seventeenth century, instead of treating it as merely the opening chapter of a vast and far-reaching change in the orientation of architecture. The Renaissance of which Mr. Frothingham treats was, in fact, the first tentative effort in a movement which was ultimately to develop into that splendid architecture which gives us Maisons and the Invalides in France, St. Paul's, Greenwich, and Hampton Court in England, and many other noble buildings throughout Europe. That movement went on steadily in France down to the French Revolution, and in England till the rise of the Romantic movement, and in spite of the aberrations of the nineteenth century it is still vital to-day

It is impossible to understand rightly the various phases of development of modern architecture unless this one essential historical fact is clearly grasped.

Mr. Frothingham's failure to grasp it vitiates all his criticism of Renaissance architecture, and indeed his critical judgment seems somewhat uncertain. He classifies as related buildings of different architectural intentions, and while he commends the sprawling portico of Sta. Maria della Grazie at Arezzo with its very badly proportioned order and fragments of entablature above the columns, he condemns the façade of the Redentore at Venice, about the best thing of its kind in Italy. Nor is he to be relied on for his facts. He says that "Gilles le Breton is responsible for a large part of the work at Fontainebleau between 1527 and 1552," and appears to rank him with that fine architect Jean Bullant. Mr. Frothingham is not aware that Gilles le Breton was contractor for the masonry at Fontainebleau, and that full entries to him for payments for this work are to be found in the "*Comptes des Bâtimens du Roi*" (1528-1571); further, that he did his work so badly that when De l'Orme took charge of Fontainebleau, in 1548, he found that the water leaked through the vaulting of the chapel, owing to Le Breton's bad workmanship,* and in his famous "Instruction" De l'Orme says: "Combien de ruines et perils fussent advenus au dict Fontayne de bleau sans moi, et à la grande gallerye." As for the Grande Salle du Bal, of which Mr. Frothingham gives a very bad illustration from Sadoux, De l'Orme says that when he took it in hand it was falling to pieces. It had only been built ten years before.

Nor is Mr. Frothingham's account of Renaissance architecture in England any happier. His description of St. Paul's is simply unintelligible. Of Wren's first design he says: "Wren first planned it as a concentric structure with a central dome on eight piers surrounded by eight smaller domes." If I may quote myself, Wren's "rejected design, roughly speaking, consisted of a square, 300 feet by 300 feet, with the four angles cut off on a quadrant described from the four points of the square. Over the central space there was to be a dome of 120 feet diameter, and 180 feet high from the floor, with four smaller domes at the N.E., S.E., N.W. and S.W. angles, of 45 feet diameter."† Mr. Frothingham makes no reference to the beautiful model now in St. Paul's and seems quite unaware of the existence of Wren's immense iron chain round the base of the inner cone. It is a pity that when our American friends write about English architecture they do not study it a little more closely.

Mr. Frothingham's volumes are well turned out, but too heavy to handle easily owing to the use of the paper required for reproduction of the photographs. There are literally hundreds of these, but no plans or sections by the author himself, and though Choisy's favourite isometrical projections look very well, they are less trustworthy and less instructive to an architect than plans and sections to scale. Throughout the two volumes no attempt whatever has been made at documentation, not a single authority is cited in the text, and there is not even a list of authorities consulted. For the purposes of scholars the book is deprived thereby of quite half its value. I come reluctantly to the conclusion that "a History of Architecture" has yet to be written—and I greatly doubt if it ever will be.

REGINALD BLOMFIELD [F.].

* De l'Orme, *Architecture*, p. 300.

† Reginald Blomfield, *A History of Renaissance Architecture in England, 1500-1800*, I., 166.



CLASSIC VINTAGE.

HERE is a nice question suitable for inclusion in an Examination Paper: "By what ancient Corporation was the following resolution passed: 'That it is the opinion of the Society that Avignon is in Italy.' How long did it survive this expression of opinion, and what distinguished men, if any, were its members?"

The answer, correctly given, is as remarkable as the question. The body of *savants* who came to this irregular conclusion lived on merrily for 146 years, and is at the present time full of cultured vitality. The amusing resolution in question was backed by another: "That no other town in France is in Italy," and the two bear no special allusion—though one might expect it—to the long residence of the Popes at Avignon. The intention of the two sentiments thus voted was to overcome in the ease of "the Hon. Captain Edgcumbe" a standing rule of the Society that no one should be admitted a member who had not sojourned in Italy. This was in the year 1746-7. Eight years later the same restrictions were again felt to be onerous and, rather than turn the map of Europe inside out, the standing rule was modified so as to admit to qualification those who had visited Italy "or some other classic ground out of the King's dominions." But the treading of classic soil was not the only qualification. Good birth and good fellowship (prandial and post-prandial) were essential, if unwritten, requirements of the earlier members of this studious brotherhood. It has contained during its career some of the most nobly born, the most learned, and the most convivial members of England's best society. The powers of drinking deeply and thinking wisely have not always been combined in equal degrees in individual members. At the present day it is hardly to be expected that the *personnel* should rise to the after-dinner standards of the mid-eighteenth century. The high-water mark (or should one say high-wine mark) has fallen, but there still floats upon the neap tide of modern moderation a company of merry-makers which, if it falls short of its predecessors in bravery with the bottle, can well hold its own in birth, brains and ability.

Look at the names of members in the present and the recent past. The Warden of All Souls is accompanied by more than one of his College Fellows. A Director of the Bank of England is coupled with a Director of the British Museum. A President of the Board of Agriculture there has met a President of the Probate, Divorce and Admiralty Division as well as Presidents of the Royal Academy and the Alpine Club. Professors are in the list, Slade Professors of

Art, and Regius Professors of Greek and History. Consuls, Ambassadors are there, and even Viceroy. Attorneys-General are, one might say, frequent, and Judges more than frequent. Among them all are many of those names which stand simultaneously in England for the highest of nobility and the deepest of cultured knowledge. In fact, it is not too much to say that the names of which the roll of members is composed represent a carefully-chosen gathering together of men who are known, men who know, and men who are noble. All of them come into two of these categories, many into all three.

If the once respectable and well-understood word *dilettante* were not now obsolete and somewhat perverted from its earlier use I should call them dilettanti—and this is, in fact, exactly what they are called.

When in the eighteenth century it became fashionable for young men of good family to complete their education by a grand tour in Italy, it was at least natural that their common interest in a shared occupation should lead to the formation of a club, and that this club should be exclusive in the sense that none was to be admitted to it who was not qualified both by social status and by participation in the pursuit of what one may call classic travel. The club at its outset was, in harmony with the spirit of the age, frankly and generally convivial; and if some of its earlier members were almost better known to the world at large by their escapades than by their learning, it is perhaps because a man's outbreaks of human nature make more stir than the secret stores of *literæ humaniores* in his brain. To be quite just to the desperadoes of those early days it must be acknowledged that even the horribly licentious and profane Sir Francis Dashwood was a generous supporter, "both by counsel and money," of the serious work of the body which he helped to found, and that even if their business meetings were orgies, their orgies were business meetings. In fact, this is the truest way of expressing their activities. It was, so to speak, a necessary element in their life as decent members of society that they should meet in carousal about once a month, and they agreed together that their monthly exercise with the bottle should be accompanied by and centred upon the promotion of classical and artistic studies. The extent of their services to archæology, painting, architecture and sculpture is greater than I can chronicle here, but to us in this Institute there stands out conspicuous one of their labours which may probably be regarded as their central and crowning achievement. It cannot, it is true, be classed chronologically as the work of their most boisterous epoch, but if it occurred in the

age when drinking was rather a pastime than a pursuit, it none the less was in direct continuation of the line of research which had been initiated, fostered, and generously encouraged by the accomplished *viveurs* of the Society's birth-era.

In the year 1839 there strode into Cambridge a tall, long-limbed undergraduate, a youth of keen brain and great physical strength, to whom work was play and play was desperately easy. His great limbs and strong sinews found a welcome in the Magdalene Eight (as well as in that of the University), and his spare energies in the intellectual and physical spheres sought opportunity in such trifles as the study of astronomy or a brisk walk to London. He was a descendant from the family of the martyred Cranmer, and his personality, oddly enough, was known to all good children of my generation under the gentle pseudonym of "Mary," for he was the origin of the child-questioner of that name in Mrs. Markham's catechetical *History of England*. His mother, in fact, was "Mrs. Markham," and Mary was no other than Francis Cranmer Penrose, architect, archæologist, and astronomer, to whom we owe the elucidation of the Parthenon, the custody for many years of St. Paul's Cathedral, and one of the most splendid portraits that ever grew under the magic brush of Sargent. To all who ever knew Penrose that square of coloured canvas in our Common Room at Conduit Street is not merely a priceless work of art, but a living memorial of one of the most kindly and modest men that ever concealed a European importance under a countenance of unassuming tenderness. Dear old Penrose.

But to return to young Penrose. Before he went to Cambridge he had been four years in the office of Edward Blore, and at some period or other before he received his degree (as tenth senior optime) he had taken water-colour lessons from the great Peter de Wint, so that by the time he had finished, in 1845, the architectural tour which he undertook as "Traveling Bachelor" of the University he was singularly well equipped for any task requiring such various faculties as accuracy, architectural and mathematical knowledge, effective draughtsmanship, and strong physique.

The Society of Dilettanti were looking for a man "to test Pennethorne's theories as to the measurements of Greek classical buildings." That such a man of twenty-eight, as Penrose then was, should be available was miraculous.

Of his work I need not here speak. All of us know his famous book which appeared under the auspices of the Society in 1847, and again in 1851; but it is of interest to note that he was made a member in 1852,

and forty-five years afterwards was the "father" of the Society.

Closely connected with the good work of Penrose among the Dilettanti was the encouragement afforded by them to (Sir) Charles Newton, who "entered into relations" with the Society in 1854. Newton was then starting on his famous exhumation of the Mausoleum at Halicarnassus, and we find him reporting progress in 1857. It was felt at that period that some architect should be sent out to assist in the work. Penrose had Pullan "up his sleeve" for the purpose, and was on the eve of recommending the Society to appoint and endow him when intelligence was received that the Government had spared them the expense by selecting and despatching the very same nominee.

In 1860 the Society brought further honour to itself, and further knowledge to the world, by fostering Cockerell's researches at Ægina and Bassæ.

It is proper to make mention here of certain friendly relations between the Society and our Institute in more recent times. In searching through their documents the Secretaries (and a special committee) of the Society discovered a few years ago a large number of spare impressions of plates prepared for past publications. These they generously distributed among certain Institutions, and to our share was added "a residuum of fine architectural plates with the original drawings."

We were sufficiently proud of this gift to hold in 1912 an exhibition, and in preparing a descriptive account Professor Lethaby made the discovery that some threescore of these plates had, as a matter of fact, never been published. The suggestion that they should be issued was readily accepted, and our Institute was permitted to join the Society as a joint-sponsor on the guarantee fund.

Some enquiries made in connection with this publication led to the very kindly presentation, through Mr. George Macmillan, of a copy of the book of which this article is a kind of review. It is a fine volume worthy of the Society; and any of our members who ask for it at the Library will be delighted by the good reproductions of the famous portraits and portrait groups which it contains. The chief of these are two noble pictures painted by Reynolds in 1779, each containing the presentment of seven members of the Society. There are also a good representation of Reynolds by himself, and some very spirited portraits by George Knapton.

The book itself is the compilation of Mr. Lionel Cust, under the editorship of Sir Sidney Colvin, and the supplemental pages are due to Mr. George Macmillan.

Truly the history of this long-lived Society is

remarkable. Every lover of the classic tradition in architecture should be grateful to those gay spirits of the century before last who brought to bear on the great work of classic discovery their wits, their wealth, and their influence. PAUL WATERHOUSE [F.].

DESIGNS FOR WAR MEMORIALS.

The first year of organisation on the part of the Civic Arts Association resulted in the recent exhibition of War Memorial designs held in the Galleries of the Royal Institute. Nearly four hundred works were submitted in competition for the specified classes, but unfortunately limited space admitted of only a small number of selected works being shown. The Association, it must be explained, owes its origin to the far-seeing policy of the Hon. R. B. Kay-Shuttleworth, who early in the war collaborated with a number of artists to found a society whose chief aim would be to act in an advisory capacity to those of the public desiring to erect memorials to their dead. In addition it was recognised that the ambitious title Civic Arts embraced practically every subject bearing upon the problems of social amenity and artistic expression, a decision arrived at through the wisdom and eloquence of Professor Lethaby. The Executive Committee of the Association have the desire to augment the aspirations of other established bodies, not only in the furtherance of artistic achievement, but more particularly regarding the interests of artists, and hope to extend the scope of their operations to soil that has remained uncultivated. The need of an organised body of artists genuinely interested in the problems arising out of the Great War is urgent. The movement in which the Association is the pioneer is as yet in its initial stages, the machinery far from perfect, the conditions seemingly overwhelming; yet the fact that a jury of responsible men, representing all sections of the sphere of art, has agreed to work in an executive capacity is an inspiring innovation with vast possibilities. The Association having organised itself, and having discussed all the conditions it would be called upon to meet, resolved to inaugurate a competition which would serve two distinct purposes: first, to assist those artists and craftsmen whom the war has seriously affected; and secondly, to enquire into, as well as to make discoveries regarding the nature of war memorials suitable for every purse. In time the scope of the Association might well be enlarged from its present advisory capacity to one in which it might exercise control in the design of monuments and their public setting.

Judging from the results of the first competition it cannot be said that artistic expression of to-day is ideal, although certain healthy signs are noticeable. There are apparently three distinct tendencies, groups, or schools in existence, which can be classed as follows: the Arts and Crafts movement; the intellectual coterie, with predilections for the teachings of Rodin and

Mestrovic; and the traditional school, which is unfortunately in the minority. Signs are not lacking that the first two groups have a common unity and sympathy, and practically unite forces in opposition to those who pin their faith to the standard of tradition. This is regrettable, but it is without doubt due to the amateurs in artistic matters possessing a smattering of knowledge and acting as direct patrons to craftsmen, the lack of a general standard of taste, and the disturbing influence of fashion.

The traditional school, which to architects is the most important, has many obstacles to overcome before it regains its once-honoured status. Its exponents are conservative of the old methods, but are keenly alive to modern thought and prefer to advance with circumspection. Notwithstanding such conflicting theories and apparent diversity of purpose among the competing artists, through the agency of the present competition several discoveries have been made. It is a well-merited triumph for the traditional school that the most important prize should have been awarded to an architect and a sculptor whose conjoint production is based on tradition. The group of sculpture flanked by trophies of war submitted by Mr. E. A. Rickards and Mr. Henry Poole, and awarded the first prize, is indubitably the best on exhibition. The second award was secured by Mr. Eric Gill and Mr. Charles Holden. This design is of quasi-religious character; its symbolical meaning has little reference to the war, but, on the contrary, aims at high moral significance. Mr. Eric Gill is a recognised theorist of the intellectual group which is at present fashionable; he aims at originality based on archaic simplicity, but he should have recognised that the legend of our Lord driving the money-changers from the Temple is too sublime to suffer translation into material terms.

The design by Mr. Alan Wyon and Mr. Stanley Ramsey, awarded the third prize, is an example of modern classic imperfectly worked out, although, considered as an idea, the conception is striking. Mr. Ramsey is well known for his theories regarding the best French models of similar character, and it is all the more regrettable that the sculptor did not rise to the occasion in the design of the figure surmounting the pedestal.

Regarding the wall tablets submitted in the various classes, these are far from convincing, although in some instances remarkable for good inscriptions and excellent lettering. The tastes of the artists vary from traditional Renaissance motifs to designs of pronounced Egyptian and Hellenic ancestry.

Mr. Eric Bradbury was awarded the first prize for a mural tablet in bronze, the design of which falls in the latter category. Mr. Eden's novel design for a carved wood tablet is an example of rich and ingenious complexity, recalling the naturalistic conventions of Grinling Gibbons transposed to terms of Gothic.

The designs submitted in the class for a Village Fountain vary considerably in expression. Mr. Cyril Farey's conception appears more suited to a vast garden than to the simplicity of a village green, and

the architectural treatment is laboured and self-conscious. Other designs show sympathy for lych-gates, seventeenth-century penthouses, and rude stone horse-troughs.

Among the lesser memorials for the home the medal stands designed by Mr. Arthur Stratton are the most distinguished, and reveal legitimacy of purpose and sound scholarship. It is a pity that the claims of tradition in this particular regard were overlooked by the jury in favour of the lesser importance of craftsmanship as displayed in the design of inlaid boxes, illuminated lettering, etc.

To sum up the results of the competition, it must be stated that the Teutonic reaction, especially of the Munich School, is very much in evidence in the majority of the designs and paintings; much of the sculpture is affected and lacking in decorative interest, and the necessity for a school of fresco painters is more than urgent. Regarding those designs in which architecture and sculpture predominate it is interesting to note how the architects and sculptors following Continental precedent have worked together to produce unity of effect. This is especially so in the case of the winning design.

The Civic Arts Association did not expect to receive standardised designs ready for use, for their primary object, as stated before, was to make discoveries and bring the necessitous artist into direct touch with the patron. The fact that the movement has been well received in the provinces and that the sympathies of local authorities throughout the country have been invoked is of good augury, for the future holds many awkward problems in store.

A. E. RICHARDSON [F].

ON INSCRIPTIONS AND WAR MEMORIALS.

On Inscriptions. By Eric Maclagan. 8vo, 16pp.

On War Memorials. By A. Clutton-Brock. 8vo, 12pp.

Both published at 3d. by the Civic Arts Association. 1916.

The two tracts issued by the Civic Arts Association should be in the hands of all architects and craftsmen. They were on sale at the exhibition of the competition designs for war-memorials at 9, Conduit Street, and will, no doubt, receive a wide publicity.

That such tracts and such an exhibition were deemed necessary is, however, a definite slur on the taste of our people. One may hunt in vain through old-time literature for any suggestion on the subject of inscriptions from the design point-of-view. Why? Because, from Greek times, such matters were instinctive with all the old craftsmen, and it was not until the end of the eighteenth century that it became unsafe to entrust a good workman with a simple tablet *in memoriam*. Charm and a general sense of good proportion were, before this time, the natural attributes to the work of a good craftsman. He required no instruction. To-day it is different. As a nation we have allowed our traditions to sleep, and it is to arouse our national instinct that such tracts and such an exhibition are necessary. But, as these tracts have

the imprimatur, although possibly in the nature of individual opinions, of an Association doing excellent work, I would cavil at certain matters.

In the memorial-tract the author, well knowing that our people have lost this old instinct, says: "The first necessity is that our war memorials should take the form of something that we ourselves like, not of something that we suppose we might like if we were artists. We must set the artist to make what we like as well as he can, not to produce something artistic. This blind submission of ours to the artist has made it impossible for us to distinguish the good artist from the bad." In the first place, there is no such thing as a bad artist. Men who design badly proportioned letters, badly spaced in their setting, or out-of-scale in relation to their site, are not artists, however well they may paint, draw, carve, or sketch technically. Designs containing the above defects are approved daily by the public because they know no better. The old instinct sleeps. It must be awakened. It is, therefore, unwise to let the man who "knows what he likes" have what he likes, at the present time, as a broad principle. His taste is almost certain to be defective.

It is to guide folks into saner ways in art that this Exhibition is of real value. Here the public, at no cost, may see an interesting set of designs, generally well judged as to their places in the various classes of competition. There is decidedly little of that deliberate originality of ugliness which unfortunately characterises much of the so-called art of to-day. It would be well, therefore, if a sixpenny or shilling book of the designs were issued at once. To these might be added a supplement of, say, fifty designs of good memorials erected during the last twenty-five years. For such things do exist. Then, gradually, the taste of the "man-in-the-street" would grow into being a help rather than a thing to fight against, as it is to-day.

My second cavil is against the undercurrent of disapproval of the Gothic styles, partly because they are Gothic and partly because inscriptions therein are supposed to be illegible. It is unfortunate that the one good Gothic memorial in the Exhibition, in itself a charming composition, should be marred by badly drawn lettering, which makes this alphabet look much less eligible than it would be in the actual work. I am not aware if many Gothic designs were submitted, but it is unfair, obviously, to condemn Gothic from this one example, and I could wish that other good examples had been shown.

Durer (my edition is Paris, 1535), in his delightful *Geometriae*, Book 3, gives a fine bold Roman type, showing exactly how these letters are set out, and, by little peculiarities of his own, he has invested this type with a Renaissance feeling. But—a point carefully ignored by runners-down of Gothic—he also gives a perfectly legible Gothic alphabet equally well set out. Let us, therefore, hear no more of this vulgar criticism which carps at Gothic. There is room for all good styles in their proper place. I hold no brief for any. But why is it that the detractors of Gothic have no hesitation in putting neo-Greek, Renaissance,

Roman and other lettering in Gothic buildings when they would condemn unhesitatingly a Gothic inscription placed in any other building than a Gothic one? Without doubt they do this partly because of a predilection in favour of anything but Gothic and partly on the score of illegibility.

Here we are up against certain principles which require careful consideration and analysis. One can understand the type of architect who cuts his name on his building—*en passant*, I may say that I do not recall to mind a fine building on which the architect has thought fit to advertise thus its parentage—designing a memorial inscription as self-assertive as "JOHN SMITH, JEWELLER," over a shop. But surely we should remember that the more important the building is on which an inscription is placed, and the more general the interest of the party or parties in memory of whom a memorial is erected, the more legible should be the inscription. This fetish of legibility should, however, not be carried to excess in private, or semi-private, memorials. Is there not a certain sense of delicacy which would guide us into designing such a memorial with some reticence, even obscurity, without losing any sense of art? I would, therefore, put in a strong plea for the smaller memorials in our churches, of a more or less private nature, to be designed in some variant of Gothic, and, for the sake of terseness, that the inscription may be in Latin.

Finally, I would recommend, as probably the best book (not excepting the two new ones just issued by Mr. Weaver and Mr. Batsford) on memorials, that by Messrs. Brindley & Weatherly, *Ancient Sepulchral Monuments*, folio, 1887. Here will be found innumerable examples of monuments having inscriptions both legible and obscure, in every style, except the "over-precious" ones of modern invention, all beautifully drawn.

Also there are hundreds of well-set-out inscriptions in Latin in a little-known work, *Inscriptiones Sacrosanctae Vetustatis*, etc., folio: Ingolstadii in Aedibus P. Apiani, 1534. This book was published at the expense of Raymond Fugger, to whom it is dedicated, and it is printed in a pleasant broad Roman type, which, as far as I know, has not been reproduced nor used for lettering. As this book is not in the R.I.B.A. Library, I am offering it to the Committee on loan for a while.

P. A. ROBSON [F.].

MURAL MONUMENTS AND TOMBSTONES.

English Mural Monuments and Tombstones: A Collection of Eighty-four Photographs of Wall Tablets, Table Tombs, and Headstones of the seventeenth and eighteenth centuries, selected by Herbert Batsford. With Introduction by Walter H. Godfrey, F.S.A. Cr. 8vo. Lond. 1916. 12s. 6d. net. [B. T. Batsford, Ltd.]

Mr. Herbert Batsford has done excellent service in presenting us with photographs of such a valuable and interesting collection of mural monuments and tombstones. It was very much needed, and has come none too soon, when in these exceptional times so many monuments are being, and will yet be,

erected to the memory of departed relatives and friends. There is something pathetic in the invariable desire to do the best we can, under such circumstances, by way of memorial, and the utter failure and want of good taste that so often attend its execution. If those concerned would only give more careful consideration to the matter, and not leave it entirely in unskilled hands, the results would give far more enduring satisfaction.

In dealing with this subject it is natural that we should review what has been done in the past, and these examples provide us with a considerable variety of monumental works. Mr. Batsford would be the first to admit that amongst the great number that exist he has been obliged to omit many valuable examples. We could have wished for a larger collection than he has given us, and, without being too exacting, we should like to have seen more of a simpler design, like those mural monuments of tablet form often met with in the late Elizabethan period. For internal monuments many of these give the true character of a memorial and provide a most appropriate field for the inscription. Simplicity and directness of purpose are essential features in such matters, and although one would not suggest that any suitable embellishment should be left out, yet the chief merit will generally be in the main architectural outline and the moulded setting.

Good examples are given of the bold, oval shields, surrounded by carved scrollwork; of these the earlier forms are always the most commendable. Some of the later types are complicated with redundant carving and ornament, and are apt to miss that which should be their chief purpose—namely, the avoidance of anything in the way of undue display and meretricious ornament, as well as the feeling of rivalry or competition with existing memorials.

As regards external monuments, interesting as many of the examples given undoubtedly are, when we consider, for instance, the crowded condition of those shown in Plate 57, in Painswick Churchyard, we are almost led to doubt the desirability of the table tomb in our small churchyards, especially in view of the ever increasing population. Where, however, there is ample room they are valuable, and the illustrations supply an excellent basis for good work. This subject suggests the question whether it might not be well in populous districts to establish a Campo Santo, or Loggia, set apart for monuments. However this may be, the consistent and well-ordered tombstone will always furnish an appropriate memorial. In these days when cremation is becoming more common the necessity for cinerary urns of suitable designs must not be forgotten; so the use of the vase in combination with the wall tablet, as well as with the external monument, may be appropriately revived for such purposes.

The choice of marble, chiefly for interior work, and of stone for general use is an essential point. The advantages of good stone are especially seen in the

examples from Painswick, where most of those illustrated remain to this day in excellent condition. Not the least important feature of the memorial is the lettering, which should be clear and boldly cut. A good instance is given on Plate 52 from the Crypt of St. Paul's Cathedral. The necessity for this may be realised from the fact that in after years, for various reasons, many tombstones get neglected, and sometimes all record of historical dates and interest is lost.

One could wish there were some well regulated and uniform system for the supervision of designs in all monuments, either through the diocesan architect or some acknowledged authority, in order to prevent the painful repetition and weak display, especially of white marble, to be seen in every churchyard and burial ground.

With reference to the tombstone, it has been truly

said that there is a demand for better things than the ordinary gravestone of commerce, but it seems to get no response. If a mason possessing real capacity opened a yard and showed a good stock of well-designed and well-lettered tombstones, he would surely get all the best of the trade. The men want to be taken in hand and taught to study the old examples, to learn the value of good outlines and proportions, of solidity, and of graceful, well-spaced, clean, and clear lettering.

Useful suggestions are given on these points in the book under notice, but perhaps more stress might have been put upon the necessity for simplicity of design and treatment in all monumental art. This, however, does not detract in any way from the obligation we are under to Mr. Batsford for this valuable collection of examples.

JAS. WILLIAMS.



9 CONDUIT STREET, LONDON, W., 29th July 1916.

CHRONICLE.

The R.I.B.A. Record of Honour : Thirty-second List.

Architects fallen in the War.

CORBETT, ALBERT EDWARD [F.], Captain, Border Regiment. Killed in action on 1st July.

Captain Corbett was the younger son of the late Mr. Joseph Corbett, for many years Borough Engineer of Salford. He was articled in 1888 to the late Mr. John Brooke, of Manchester, and attended various classes at the Manchester School of Art. From 1896 to 1901 he was assistant to Mr. Allan F. Vigers, of 7 South Square, Gray's Inn, and during this time attended the Royal Academy and Architectural Association Schools and the L.C.C. Arts and Crafts School. He passed the Final Examination in 1896 and was elected Associate of the Institute in 1897. He started practice at 78 Cross Street, Manchester, in 1901, occupying half his time until 1906 as Lecturer in the Manchester School of Architecture. He afterwards became a member of the firm of Woodhouse, Corbett & Dean, of 100 King Street, Manchester. Among important buildings in the design and carrying out of which he had a considerable share are Engineering Works at Brighouse, Motor Garage in Salford, Young Men's Christian Association premises at Manchester, Offices of the Know Mill Printing Co., etc. He was elected Fellow of the Institute in 1911. The following Papers which he read before the Manchester Society of Architects were published in the Institute JOURNAL : "Modern Domestic Architecture" (JOURNAL R.I.B.A., 9th Jan. 1904) and "Concrete and Concrete Tests" (ib., 12th Nov. 1910).

CUBEY, JOSEPH BERKELEY [A.], Captain, 23rd

Northumberland Fusiliers (4th Tyneside Scottish). Killed in action.

Captain Cubeby served his articles with Mr. J. Walter Hanson, of South Shields, and was for some years a student and worker in connection with the Northern Architectural Association. He was elected an Associate of the Institute in 1908. He was for several years assistant in the office of Mr. A. B. Plummer [F.], and left there to take up an appointment in the Land Valuation Office at Newcastle, which he held until he joined the Army.

FORD, LAWTON STEPHEN [Student], Lieutenant, Queen's Royal West Surrey Regiment. Killed in action in France on 1st July. Aged 26.

Lieut. Ford was the only son of Mr. Lawton Robert Ford [A.], District Surveyor for St. James's, Westminster. After passing the London University Matriculation Examination he entered the Architectural Association Schools, and in 1913 took a high place in the Intermediate Examination and was registered a Student R.I.B.A. He joined as a private in the Army Service Corps Motor Section in the early days of the War, and in April 1915 was granted a commission in the West Surreys and went to France in the following September. His Commanding Officer, Colonel Longbourne, in a letter to the bereaved parents, speaks in high praise of the gallant young officer; on more than one occasion, he says, he noted Lieut. Ford's worth as a leader of men.

GORDON, DONALD JERVIS [Probationer], 2nd Lieut., Border Regiment, son of the late Thomas Gordon [A.]. Killed in action.

GRIFFIN, DOUGLAS MORLEY [A.], 2nd Lieut., King's Liverpool Regiment. Died of wounds. Aged twenty-six.

2nd Lieut. D. M. Griffin was articled to Messrs. Harris & Hobson, of Liverpool, and attended the Liverpool University School of Architecture, passing the Certificate Examination in 1910. Having completed his articles, he became assistant to Mr. Henry Hartley [F.], of Liverpool, and was elected Associate of the Institute in December, 1914.

GROUND, JOHN KINGSTON [A.], 2nd Lieut., 10th Bn. Royal West Kent Regiment. Killed in action.

2nd Lieut. J. K. Ground received his professional education in the Architectural Association Schools and served his articles with Messrs. Forsyth and Maule, afterwards becoming an assistant in their office. He was elected an Associate of the Institute in 1912, and later entered into partnership with Mr. Hubert Bensted [A.] at Maidstone.



WILLIAM HAROLD HILLYER, *Student*.
Captain, Royal Engineers.
Killed in action [see p. 251].



JOSEPH BERKELEY CURREY, *Associate*.
Captain, 23rd Northumberland Fusiliers
(4th Tyneside Scottish).
Killed in action [see p. 290].



LAWTON STEPHEN FORD, *Student*.
Lieutenant, Queen's Royal West Surrey Regiment.
Killed in action [see p. 290].



NOEL WAUGH HADWEN, *Associate*.
Captain, Duke of Wellington's Regiment.
Killed in action [see p. 292].

HADWEN, NOËL WAUGH [A.], Captain, Duke of Wellington's Regiment. Killed in action in France on 1st July. Aged 30.

Captain Hadwen was the second son of Mr. E. W. Hadwen, of Kelroyd, Triangle, Yorkshire. He was educated at Locker's Park, and afterwards at Harrow. He took up the profession of an architect, and was articled to Mr. Romaine-Walker, afterwards going as an assistant to Mr. Guy Dawber, with whom he was taken into partnership a few years ago. He was elected an Associate of the Institute in 1910.

After the outbreak of war Mr. Hadwen, in September 1914, obtained a commission in the Duke of Wellington's Regiment and went to France in 1915. He was in the engagement at Hill 60 in May of that year and was gas poisoned. As soon as he was well enough he returned to the front and was almost continuously engaged in fighting with his regiment, only to meet his death in action on 1st July.

Mr. Guy Dawber writes:—"In Hadwen the profession has lost one of those modest, unassuming men who in their quiet way exercise much influence for good. I had known him for many years as a charming and cultured man, with that rare gift of making friends of both clients and builders and with all who came into contact with him. He was keenly interested in his work, a brilliant sketcher and painstaking student, and gave great promise of ability in design. Had he been spared he would eventually have done much good work for the Institute." Though not personally acquainted with many architects, those who really knew him will deeply regret his loss.

SHAPLEY, ALFRED EDWIN [Probationer], Lieut., Northumberland Fusiliers, formerly Member of the Northern Architectural Association. Killed in action.

STOTT, ALFRED EDGAR [Student], King's Liverpool Regiment. Died of a gunshot wound at Abbeville on 23rd June.

Mr. Stott passed the Intermediate Examination and became a Student in 1912. He was a pupil of Mr. Joseph Pearce, of Liverpool, who writes: "I should like to place on record a word of appreciation for my old pupil: 'He did his work faithfully and well.'"

BELL, ERIC NORMAN FRANKLAND, Captain, Royal Inniskilling Fusiliers. Killed in action.

Captain Bell was a student at the Liverpool University School of Architecture, and was about halfway through his course at the Liverpool School when war broke out. He was among the first to volunteer for service, and went to France last October, when he was put in charge of trench mortar work.

BENNETT, WALTER J., 2nd Lieut., 12th Royal Scots. Killed in action.

2nd Lieut. Bennett served his articles with Mr. Lake Falconer, of Blairgowrie, and afterwards practised at Glasgow and St. Andrews. He went to the front in October last, in the following month was accidentally wounded by the explosion of a hand grenade, and was invalided home. He returned to the front last May.

BROUGH, J. LINDSAY, 2nd Lieut., 15th Royal Scots. Killed in action.

GRAHAM, PERCY G., Captain, 16th Northumberland Fusiliers. Killed in action.

Captain Graham was a Member of the Northern Architectural Association, and joined the ranks soon after the outbreak of war. He was the champion swimmer in the North of England, for seven consecutive years holding the Newcastle Corporation Cup, and was also an International polo player.

LAURENCE, J. L., Captain, Royal Scots. Killed in action.

ROBERTS, REUBEN, Captain, Army Ordnance Department. Killed in action on 8th July.

Captain Roberts served his articles with Messrs. Lockwood & Sons, of Chester. He joined the Inns of Court O.T.C. in January 1915, and was granted a commission in the Army Ordnance Department. He saw considerable service abroad, and last March was promoted captain and appointed Deputy Assistant Director of Ordnance Supplies.

VENMORE, J. F., Lieut., Royal Welsh Fusiliers. Killed in action. Aged twenty-seven.

Lieut. Venmore studied architecture at the Liverpool University, and was engaged in the architectural profession at Liverpool. On the outbreak of war he enlisted in the 3rd Battalion of the Liverpool "Pals," and received a commission in the Royal Welsh Fusiliers in December 1914. In March last he was awarded the Military Cross for conspicuous bravery.

In deepest sympathy with the parents, the names of the following, sons of members of the Institute, are included in this Record:—

ATKIN-BERRY, HAROLD HARDING, Lieut., R.N., third son of Mr. W. H. Atkin-Berry [F.]. Killed in action. Aged twenty-four.

BOND, CHARLES NESBITT, Lieut., Adjutant of the Lincoln Regiment, son of Mr. Francis Bond [Hon. A.]. Killed in action. Aged twenty-two.

PEGG, H. W., 2nd Lieut., East Surrey Regiment, youngest son of Mr. H. Carter Pegg [F.]. Died of wounds. Aged nineteen.

SAXON SNELL, FRANK, B.A. Cantab., 2nd Lieut., Royal Berkshires, only son of Mr. A. Saxon Snell [F.]. Killed in action. Aged twenty-nine.

TANNER, E. J. S., 2nd Lieut., Machine Gun Corps, fourth son of Sir Henry Tanner [F.]. Killed in action.

Serving with the Forces.

The following is the Thirty-second List of Members, Licentiates and Students R.I.B.A., serving with the Forces, the total to date being 64 Fellows, 472 Associates, 270 Licentiates, and 282 Students:

FELLOW.

Davis, Arthur J.: Staff Lieut., Censors' Dept., B.E.F.

ASSOCIATES.

Davies, J. C. G.: 2nd Lieut., 2nd Welsh Brigade, R.F.A.
 Parker, T. A.: Lieut., Royal Naval Air Service.
 Pett, H. M.: Royal Engineers.
 Pearce, G. E.: Lieut., Royal Engineers.
 Pierce, A. P. Hector: New Zealand Field Artillery.
 Pigott, R. Mountford: Lieut., Royal Engineers.
 Rylatt, Walter P.: Royal Garrison Artillery.
 Santo, V. G.: Royal Engineers.
 Sawyer, Harold S.: Capt., Brigade Bombing Officer, 14th Mounted Brigade.
 Sifton, I. T.: 4th Reserve Bn. London Regt. Royal Fusiliers.
 Simpson, C. H.: Artists' Rifles.
 Stockton, Russell: Royal Naval Division.
 Sutton, C. A. L.: Royal Naval Air Service.
 Thompson, J. Osbert: Royal Engineers.
 Wardrop, J. H.: Australian Forces.
 Whincop, W. G.: Royal Garrison Artillery.
 Wood, A. J.: Royal Engineers.
 Woollatt, John: Royal Engineers.

LICENTIATES.

Blackburne-Daniel, George Francis: 2nd Lieut., 6th Bn. Royal Fusiliers.
 Bull, W. W.: Asst. Divn. Officer, R.E. Services.
 Kyle, A. W.: 4th Bn. Durham Light Infantry.
 Ovenden, H.: Royal Garrison Artillery.
 Palmer, B. H.: Royal Engineers.
 Peacock, J. H.: Royal Engineers.
 Salmond, Wm.: Royal Engineers.
 Sharpe, T. W.: Royal Engineers.
 Shennan, D.: A.M.C. Training Depot, Canada.
 Stienlet, P. J.: Royal Navy, Transport Divn.

STUDENTS.

Beville, J. Geoffrey: 2nd Lieut. Queen's Westminster Rifles.
 McLachlan, C.: 12th County of London Regt.
 Stewart, C. B.: King's Own Yorkshire Light Infantry.

Military Honours.

CULLIFORD, LEONARD ARTHUR [A.], 2nd Lieut., Royal Engineers, 2/3rd London Field Co., B.E.F., France. Awarded the Military Cross.

The Territorial Decoration has been conferred upon the following:—

BAILY, B. E. [F.], Major, 7th Sherwood Foresters (Notts and Derby Regiment).

BECKWITH, H. L. [Licentiate], Lieut. Colonel, attached 7th West Yorks Regiment.

Promotions.

Major V. A. Flower [Licentiate], London Regiment, to be temp. Lt.-Colonel.
 Lieut. Martin S. Briggs [A.], R.A.M.C., 53rd Sanitary Section, to be Captain. Serving in Egypt.
 Mr. K. A. Cockrill [A.], to be 2nd Lieut. 15th Bn. Royal Fusiliers.
 2nd Lieut. C. W. Eaton [A.], 11th Bn. Leicestershire Regt., to be Lieut.
 2nd Lieut. Cyril A. Farey [Student], Army Service Corps, to be temp. Captain while holding special appointment.
 Lieut. Bernard Hebblethwaite [A.], R.A.M.C., to be Captain.
 Mr. S. T. Hennell [A.], to be 2nd Lieut. 20th Bn. Welch Regt.
 Mr. F. J. Horth [Licentiate], to be Lieut. 2/5th K.L.R.
 Mr. G. H. Jones [A.], Public School Bn. Royal Fusiliers, to be 2nd Lieut.
 Gunner G. Gordon Leith [A.], to be 2nd Lieut. R.F.A.
 Lieut. H. E. Moore [A.], Royal Monmouthshire R.E., to be Captain.
 2nd Lieut. W. G. Newton [A.], London Regt., to be Adj., with temporary rank of Lieutenant.
 Cadet Robert W. Pite [Student], O.T.C., to be 2nd Lieut., Royal Engineers.
 Mr. J. L. Warry [A.], to be 2nd Lieut. 2/8th Bn. Sherwood Foresters.

Immelman's Conqueror.

Members will note with interest that Lieutenant George Reynolds McCubbin, the youthful airman who vanquished Immelman, the famous Fokker pilot, is the son of a Licentiate of the Institute, Mr. David Aitken McCubbin, of Johannesburg, Architect-in-Chief to the South African Railways. Lieut. McCubbin has since been twice wounded, and is now in hospital in London. It was announced yesterday that the D.S.O. has been conferred upon him "for conspicuous gallantry and skill."

Charing Cross Station and Bridge.

On the motion for the second reading of the Charing Cross Bridge Bill in the House of Commons on the 3rd July, the Bill was rejected by a majority of 42,—25 voting for, and 67 against the motion. Space admits of only brief reference to the able and interesting speeches delivered in the three hours' debate on the question. The previous history of the measure, the case for its rejection, and the unique town-planning possibilities of the area affected are sufficiently set out in Sir Aston Webb's *Observer* article (reproduced in the last issue of the JOURNAL), in Mr. Davidge's article (JOURNAL, 10th June), in the Petition presented to Parliament by the R.I.B.A. and the London Society (JOURNAL, 24th June), and in Mr. Raffles Davison's Paper "Beautiful London" (JOURNAL, 23rd May 1914).

Sir Walter Essex, who moved the rejection of the Bill, referred to the Instruction passed by the House of Lords that evidence should be taken from the Royal Institute of British Architects, the London Society, and others on the treatment of this important part of London, and mentioned that those bodies had suggested for the consideration of the people of London a higher and a nobler idea. The time had come for doing away with the great excrecence by which the railway was hopelessly cramped and hindered in the full discharge of its duties to the public and by the limitations of the site on which the station is placed. A very much larger and wholly adequate site for the station could be found on the other side of the Thames.

The occasion was marked by the re-entrance into the Commons' debates of Mr. Burns, who spoke with all his old vigour and force. If, he said, we had in this country, as in Germany, Austria, France, or Belgium, a Minister of Arts or an Office of Works vested with the duty and responsibility of guiding Parliament in these matters, this Bill would never have passed the examiners. The architectural profession and the Royal Academy and other bodies were all against it. What, he asked, has made London increasingly a place to which tourists are coming from all parts of the world? It is its cleanliness, its sanitation, its comfort, and in recent years the attractiveness brought about by the enormous expenditure of public bodies. Beauty in a city is not a thing that materialists and cynics can brush lightly aside. It is paid for in solid cash by the people who value natural beauty in a city such as this river affords us, blended with architectural adornments, and the harmonious and symmetrical unity of commerce with civic pride, public taste, and fine public amenities. Mr. Burns recalled that just over a hundred years ago, Wordsworth, standing on old Westminster Bridge, looking in the direction of Waterloo Bridge, without any monstrosity like Charing Cross Bridge to obstruct the view, wrote:

Earth hath not anything to show more fair,
 Dull would he be of soul who could pass by
 A sight so touching in its majesty.

Wordsworth would never have written those lines to-day. Constable painted one of his finest pictures from Westminster when he gave us, without Charing Cross Bridge, a splendid picture of that magnificent sweep from Westminster Bridge to Waterloo. Canova, the great Italian artist and sculptor, said that to see a single arch of Waterloo Bridge was worth coming from the remotest corners of the earth. Mr. Burns recalled the proposal by a syndicate some years ago to overwhelm the Houses of Parliament by building a second Hankey's Mansions on the site of the new Garden west of the Victoria Tower.

The Bill to enable this to be done had passed the second reading and had got through the Committee. On that occasion he appealed to the House to accept his guarantee that if they threw out the Bill he would persuade the London County Council to get rid of the wharves and the unsightly promises between Lambeth Bridge and the Houses of Parliament. The House of Commons responded to his appeal and threw out the Bill. And the County Council had kept its word. They had spent a million of money between the Victoria Tower and Lambeth Bridge on a fine garden, a vast embankment, a new road, and they had attracted by that wise expenditure large private corporations to put up some of the handsomest buildings that had been erected in London in the last twenty years. If we could do that for a garden, what ought we not to do to relieve that noble sweep of the Thames from Westminster to Waterloo Bridge from the monstrosity that even a railway company could not defend. He appealed to the House to give Sir Aston Webb, the architect, the Office of Works, the Home Office, and the Board of Trade, in conjunction with the railway company, a chance to come together and discuss the matter in a sane, practical way, without any prejudice to the railway company.

Speakers in favour of the Bill considered the measure justified in view of the evidence brought forward that the bridge was not safe for traffic. Captain Pretymann, on behalf of the Board of Trade, stated that traffic had already to be reduced by 50 per cent. owing to the condition of the bridge, and if the Bill were rejected it would have to be still further curtailed. There was, however, general agreement among all the speakers as to the desirability of shifting the station to the other side of the river.

The Joint Committee of the Institute and the London Society who have so successfully combated the Bill consisted of Sir Aston Webb, R.A., *Chairman*; Mr. Ernest Newton, A.R.A., *President* I.B.A.; Mr. Reginald Blomfield, R.A., Professor Beresford Pite, Mr. Paul Waterhouse, Mr. D. Barclay Nivon, Professor S. D. Adshead, Mr. T. Raffles Davison, Mr. H. J. Leaning, Mr. Randolph Glen, Mr. Douglas Fox, and Mr. W. R. Davidge, *Hon. Secretary*.

In the *Observer* last Sunday Mr. Edgar Horne, M.P., calls attention to the heavy responsibility which lies on the State, the London County Council, and the Railway Company to move without delay in this matter, and makes the following suggestions:

What is required now is the direction of the initiative and the allotment of the responsibility for the expense.

I would suggest that the railway companies should at once proceed to schedule an area of land on the south side of the river suitable for the erection of a station, its approaches and connections, with the view to an application to Parliament next Session for compulsory powers, and that in this work it should receive the sympathetic co-operation of the London County Council.

Plans for a new station and connecting lines with the existing system on the site so obtained should be drawn up, giving accommodation at least 50 per cent. beyond that enjoyed at the present time at the existing station and its approaches. The construction of this station and of the necessary connections (but not the cost of the land) should be borne by the London County Council, as I am treating this part of the improvement on the lines of a reinstatement scheme. The new station and the approaches would therefore form the contribution of London to the improvement. When the new station and lines are completed and all is ready for traffic the existing station and bridge and the land should be handed over to the London County Council.

So far as the new road bridge is concerned this should be erected at the cost of the State, and when completed should be

handed over to the London County Council, who should be responsible for its upkeep.

So soon as the railway company has given possession of the old station to the London County Council, together with any other land which it has acquired in connection with it, it should receive from the London Council an amount, to have been previously agreed, for the purchase of this land—I suggest that somewhere about £15 a foot would be an equitable price to be fixed. I have no doubt that the London County Council would lose little in this transaction if a proper scheme of development were decided on.

I have now apportioned part of the expense on to the shoulders respectively of the London County Council and of the State, and the question remains as to the contribution to be made by the railway company, who must remember that it is granted very valuable easements and a trading monopoly from the State. The contribution I suggest, therefore, which the railway company should be asked to make is the forgoing of all claims for the loss of profits obtainable from the short length of line abandoned by them. They will obtain, without cost, a new station at least 50 per cent. larger than the present one, constructed on modern lines, and this should be capable of accommodating twice as much traffic as the old station. It should also be remembered that they will be handing over a bridge unable to deal at present with more than 50 per cent. of the traffic it is nominally planned to carry. The economy in working which these alterations will effect and the largely increased profits which will be available for dividends would more than counterbalance the contribution now proposed.

If this scheme is accepted it would be quite feasible to insert a clause in the new Bill authorising the expenditure for strengthening the present structure for its few remaining years of life.

Control of Building: Government Restrictions.

The Minister of Munitions has issued the following notice:

In pursuance of the powers conferred upon him by the Defence of the Realm Regulations, the Minister of Munitions has issued the following order:—

On and after the twentieth day of July, 1916, no person shall without licence from the Minister of Munitions commence or carry on any building or construction work—that is to say, the reconstruction, alteration, repair, decoration, or demolition of buildings, or the construction, reconstruction, or alteration of railroads, docks, harbours, canals, embankments, bridges, tunnels, piers, or other works of construction or engineering. Provided that where the total cost of the whole completed work in contemplation does not exceed the sum of £500 and the use of constructional steel is not involved the licence of the Minister of Munitions shall not be required.

Provided also that where the work in question—

(a) is being or is to be carried out by or under contract with any Department of his Majesty's Government, or is declared by any such Department to be a Government contract for the purpose of this Order, or

(b) is being or is to be carried out by or under contract with any local authority which has been authorised by any Government Department since the 25th of March, 1915, to borrow money in respect of such work, the licence of the Minister of Munitions shall not be required.

Provided also that where a first application for a licence under this Order has been made and is pending for the carrying on of work which has been commenced before the said twentieth day of July, 1916, nothing in this Order shall prohibit the carrying on of such work until the licence has been refused.

All persons desirous of obtaining a licence to commence or carry on any building or construction work as above defined for which a licence is required shall apply in writing to the General Secretary, Ministry of Munitions, 6 Whitehall Gardens, S.W., for such licence, and shall give full particulars of the description and locality of the work, the purpose for which it is intended and its estimated cost, and such further information as the Minister may require, and shall comply with any restrictions or conditions subject to which the grant of such licence may be made.

Sir Rowand Anderson and the Royal Gold Medal.

Sir R. Rowand Anderson [F.] was the guest of the Architectural Societies of Scotland at a luncheon given in his honour at the Caledonian Station Hotel, Edinburgh, on the 29th ult., to celebrate the distinction conferred upon him as the first Scottish architect to receive the Royal Gold Medal for Architecture [see JOURNAL, 24th June]. Mr. T. F. MacLennan [A.], President of the Edinburgh Architectural Association, occupied the chair. The company numbered about 100, and included Lady Anderson, Lord Provost Sir Robert Innes, Sir John H. A. Macdonald, Sir James Balfour Paul, Sir John J. Burnet [F.], Professor Baldwin Brown [Hon. A.], Sir Robert Lorimer [F.], Rev. Dr. Wallace Williamson, Mr. Paul Waterhouse [F.], and the following croupiers: Messrs. John Watson [F.], Glasgow; Harbourn MacLennan, Aberdeen; and George P. K. Young [F.], Dundee.

Lord Provost Innes handed the Medal to Sir Rowand,* and read a letter from Sir Aston Webb expressing admiration of Sir Rowand Anderson's work as an architect, and also in the cause of architectural education.

Sir John J. Burnet presented an address of congratulation in the name of the Architectural Societies of Scotland, in which reference was made to the magnificent record of Sir Rowand Anderson's accomplished work, the invaluable services he had rendered to the cause of architectural education, and his devotion to the interests of the profession. Sir John Burnet alluded to Sir Rowand Anderson's great characteristics, his constructive power, his knowledge of the craft, and his high ideals of craftsmanship which he had done much to develop.

The Chairman said they were all proud to show Sir Rowand Anderson's works to admiring strangers as those of an Edinburgh man; they were worthy additions to the architecture of their beautiful city. On behalf of the younger generation he expressed indebtedness to Sir Rowand for his generous and invaluable services in the establishment of sound architectural teaching in Edinburgh for the ideals which inspired him, and for the fight he had made against all shams in misapplied architecture.

Sir Rowand Anderson expressed his gratification at receiving so generous a tribute from his brother architects.

Arts and Crafts: Scheme for a Great Exhibition.

The Arts and Crafts Exhibition Society are organizing an exhibition to be opened in the first week of October at Burlington House. A guarantee fund of £1,500 is being formed for the preliminary work, under a finance committee of which Mr. W. Lee Matthews is chairman and Mr. C. H. St. John Hornby, hon. treasurer. The President and Council of the Royal Academy have granted the free use of their galleries. In each room will be constructed temporary interiors, which will be decorated and furnished by different artists. Within these interiors will be arranged individual works selected for their fitness to the scheme of decoration adopted. There will be a large municipal hall, the sides divided into bays, each decorated in harmony with an agreed scheme. Another gallery will be fitted up as an ideal Council Chamber. The central octagon will be divided into a series of apsidal chapels, decorated by individual artists or groups of artists. In the entrance gallery will be constructed a panoramic suggestion for the reconstruction of Trafalgar Square. Mr. E. S. Prior, A.R.A. [F.], 1 Hare-court, Temple, is Hon. Secretary of the Exhibition Society.

* Sir Rowand, it will be remembered, was not well enough to come to London to be invested with the Medal, and Sir Robert Innes attended and received the Medal on his behalf.

The Civic Arts Association's Exhibition.

The Civic Arts Association's Exhibition of Designs for War Memorials was held in one of the Galleries of the R.I.B.A., 9 Conduit Street, W., and was open to the public for twelve days, from the 17th to the 29th inst. H.M. the Queen honoured the Exhibition with a visit on the 19th. The opening ceremony, presided over by Mr. Ernest Newton, A.R.A., President R.I.B.A., was attended by a large and distinguished company, and an address was delivered by Mr. Arthur C. Benson, Master of Magdalene.

Mr. BENSON said we had a task before us to see that the memory of those who had fought and died for us should be as stably and durably commemorated as possible. Our present task was to see that our dead were worthily commemorated for our own sakes and for the sake of those who would come after. We must not do it idly and carelessly—we must take thought of the plan and the purpose, and not be in too great a hurry. What he hoped we should do was to take careful thought where our memorials should be set, so that they might be most constantly and plainly seen; and then how they might best fulfil their purpose. What we wanted were beauty, dignity, simplicity, and force. We wanted what appealed directly to the eye and then darted a strong emotion into the heart. It would be well if some central advisory board could be established, and the nature of the memorials should be carefully scrutinised. Simplicity, naturalness, eloquence of emotion rather than of word would, he hoped, be the notes of our memorials.

The BISHOP of WAKEFIELD, moving a vote of thanks to Mr. Benson, remarked that they all hoped they would have the assistance and the cordial sympathy of the best hearts and brains that could be brought to bear in this matter when they came to put up their simple memorials in their village churches.

The CHAIRMAN said it was for them to see that the churches and homes of Great Britain were not disfigured by an eruption of "trade" brasses and tablets which would dishonour the memory of our heroes.

Sir CECIL HARCOURT SMITH, Chairman of the Executive Committee of the Civic Arts Association, said that about four hundred designs had been received from all parts of the country, and it was hoped that arrangements would be made for sending the exhibits for a short term to important centres in the provinces.

The following is the list of prizewinners:—

CLASS I.—Design for the London County Council Staff Memorial.—First prize, £50, E. A. Rickards [F.], and Henry Poole, R.B.S.; second prize, £15, Eric Gill, sculptor, and Charles Holden [A.], architect; prize, £10, Alan Wyon and Stanley Ramsey [A.].

CLASS II.—Design for a Wall Tablet in Cast Bronze.—First prize, £20, Eric Bradbury; second prize, £5, H. P. Gill and R. F. Wilson; prize, £5, Macdonald Gill; book prize, W. A. Robertson.

CLASS III.—Design for a Wall Tablet in Carved Wood.—First prize, £20, Thomas Rayson; second prize, £5, F. C. Eden; book prize, Walter John Brown.

CLASS IV.—Design for a Wall Tablet in Marble or Stone.—First prize, £20, Eric Gill; second prize, £5, Alec Miller; book prize, Mrs. Bernard Jenkin.

CLASS V.—Design for a Simple Wall Tablet in Wood.—First prize, £10, Tom Broadbent; second prize, £5, A. E. Martin; book prize, Thomas Rayson.

CLASS VI.—Design for Mural Painting for a Boys' Club.—First prize, £10, Gladys D. Davison; second prize, £5, Miss Elsie McNaught; prize, £5, Miss Lanchester.

CLASS VII.—Design for a Fountain for a Country Town or Village.—First prize, £20, Cyril A. Farey; second prize, £5, T. H. Morcom; prize, £5, Miss Helen Frazer Rock.

CLASS VIII.—Inexpensive Memorials for the Home.—Miss Muriel Perrin, Arthur Dix, Miss Lillian Frost, and James Guthrie (equal), £3 each; Miss Joan Kingsford, £1.

THE EXAMINATIONS.

Probationership R.I.B.A.

Under the Regulations published by the Council in the month of March last, the Preliminary Examination has been abolished, and instead thereof candidates for Probationership R.I.B.A. are required to produce evidence of their general education satisfactory to the Council. Particulars of the evidence required will be found in the JOURNAL for 4th March and 10th June. The Examination in Geometrical or Perspective Drawing, and in Freehand Drawing, will still be continued for those candidates who are unable to produce satisfactory evidence in the shape of drawings of an elementary knowledge of these subjects.

The Intermediate Examination.

The Intermediate Examination, qualifying for registration as Student R.I.B.A., was held in London from the 2nd to the 9th June. Of the four candidates examined, three passed and one was relegated. The passed candidates, who have been registered as Students, are as follows, the names being given in order of merit:

WINKS: Ernest Wall [P. 1913]; 93 Bridge Street, Worksop.
WILKINSON: Fred [P. 1916]; 162 Long Lee Terrace, Keighley.
EDMONDSON: Thomas [P. 1913]; Brunshaw House, Burnley.

Exemptions from the Intermediate.

The following Probationer, having produced satisfactory evidence of his training and qualifications, was exempted from sitting for the Intermediate Examination and has been registered as a Student:—

BRANDON: Charles Joseph [P. 1913]; 7 Trebovir Road, Earl's Court, S.W. [Architectural Association Schools.]

In accordance with the special concession granted by the Council to Probationers serving with the Forces who are eligible for the Intermediate Examination and whose Testimonies of Study have been approved, the following were also exempted:—

AUSTIN: Leslie Magnus [P. 1915]; 40 Wood Vale, Forest Hill, S.E. (Army Reserve.)
CLOTON: Albert Rowland [P. 1911]; 62 Main Road, Handsworth, near Sheffield.
EVANS: Eric Ewart [P. 1911]; c/o Matthew Honan, Esq., 36 Dele Street, Liverpool. (Royal Engineers.)
FERGUSON: J. S. [P. 1916]; 14th Field Co. Engineers, 5th Australian Division, Egypt.
HUXEIN: William Burrows Clement [P. 1914]; Cae. Rhys, Ddu, Neath, Glam. (Royal Welsh Fusiliers.)
LAWRENCE: Henry Matthew [P. 1915]; 22 Marmion Street, Tamworth.
LAWSON: Edwin Maddison [P. 1915]; "Fairfield," 2 Ivanhoe Terrace, Chester-le-Street, Co. Durham. (Royal Navy.)
PILDITCH: Philip Harold [P. 1913]; Bartropp, Weybridge. (Royal Field Artillery.)
RICKATSON: John [P. 1912]; Market Place, Market Weighton, E. Yorks. (Royal Flying Corps.)
SUTCLIFFE: Thomas Wilfrid [P. 1913]; 23 Edmund Street, Roehdale. (Royal Navy.)
SYKES: Alfred Howard [P. 1913]; 90 Birkby Hall Road, Huddersfield. (Artists' Rifles.)
WEEKES: Norman Barnett [P. 1915]; c/o Liverpool Corporation Engineers Department. (Royal Engineers.)
WILSON: Reginald Alexander [P. 1914]; 259 Oxford Street, Swansea. (Highland Light Infantry.)

The Final and Special Examinations.

The Final and Special Examinations, qualifying for candidature as Associate R.I.B.A., were held in London from the 22nd to the 30th June. Of the 20 candidates

admitted, 13 passed, and the remaining 7 were relegated in various subjects. The successful candidates are as follows:—

ARMSTRONG: John Ramsay [S. 1914]; 2 Marshall Place, Perth.
BRANDON: Charles Joseph [S. 1916]; 7 Trebovir Road, Earl's Court, S.W.
ELGAR: Wm. Henry [S. 1911]; 48 Watkin Road, Folkestone.
ELLISON: Robert Kitching [Special]; 13 Shaftesbury Avenue, Bedford.
FOULKES: Sidney Colwyn [Special]; Central Chambers, Colwyn Bay.
HALL: Robert Brearley [S. 1911]; Exe Vale, Letchworth.
HOLMAN: Arthur Rowland [S. 1902]; 27 Westbourne Road, Penarth, S. Wales.
HUTTON: Lorne De Hutton [S. 1915]; 2nd Artists' Rifles, Hare Hall Camp, Romford, Essex.
LOWRY: Robert [S. 1909]; 5 Park Road, East Twickenham.
LUYKEN: Heinrich Martin [S. 1912]; 23 Arcadian Gardens, Wood Green, N.
SPARROW: Arthur John [S. 1912]; Ingram House, Stockwell Road, S.W.
TODD: Harold Edgar [S. 1915]; Harts Cottage, Almondsbury, near Bristol.
WILSON: James Frederick [S. 1912]; 40 Upton Road, Newport, Mon.

NOTICES.

Subscriptions of Members serving with the Colours.

On the 31st December 1915 the Council passed a resolution to the effect that they would remit the subscriptions and contributions due 1st January 1916 of all Members and Licentiates serving with the Forces who made a written application for such remission before 1st July 1916. The Council have now resolved to extend the remission to all serving with the Forces whose applications in writing are received before 31st December 1916.

Licentiates and the Fellowship.

The next Examination of Licentiates desiring to qualify for candidature as Fellows will take place in January, 1917. Applications for admission to the Examination must be sent in by the end of the current year.

Employment for Architects.

Architects who are hit by the war and desirous of obtaining employment, even at a small weekly remuneration, are recommended to apply to the Hon. Secretary, Architects' War Committee, 9, Conduit Street, W.

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OFFICE OUTFIT.—An architect retiring from practice, offers his complete office furniture, library, and effects for sale. A reasonable price to clear. Apply Box 248, R.I.B.A. Journal, 9 Conduit Street, W.



LESNES ABBEY : DOORWAY, SOUTH-WEST OF CLOISTER, WEST FACE.

LESNES ABBEY.

Lesnes Abbey in the Parish of Erith, Kent. By Alfred W. Clapham, F.S.A., 4o. Lond. 1915. 10s. 6d. net; édition de luxe, 18s. 6d. [The Cassio Press, 5 Lamb's Conduit Street, W.C.].

THE recovery, by excavation and clearing, of the nation's buried treasures of old building-work, actual fragments of the country's history, has ever amongst architects been followed with appreciative interest as from time to time welcome finds have been brought to light by diligent investigators. Certainly throughout the past century of comparative quiet architects have not failed duly to note and appraise various acquisitions to the archæological treasure-chest of this land; how much the more now, whilst in the thick of a war such as never was, should we be moved to greet with interest and pride any addition made to the tale of our possessions! And surely it is not without a certain significance that the published account of one such addition comes to us at this present time; put forth, as it seems to be, in a spirit of firm confidence, bespeaking quiet occasion by-and-by for its perusal and undisturbed opportunity for following up the line of study to which it points, whilst at the same time adding to the roll one precious record the more. Now, more than ever, is the national heritage of building work, that has come down to us from days gone by, to be taken count of and appreciated by all who care for what the country holds; and more than ever is it incumbent on architects to attain to as full and thorough an understanding as possible of individual remains available for study; for who, if not the architect, should be the interpreter of building-work?

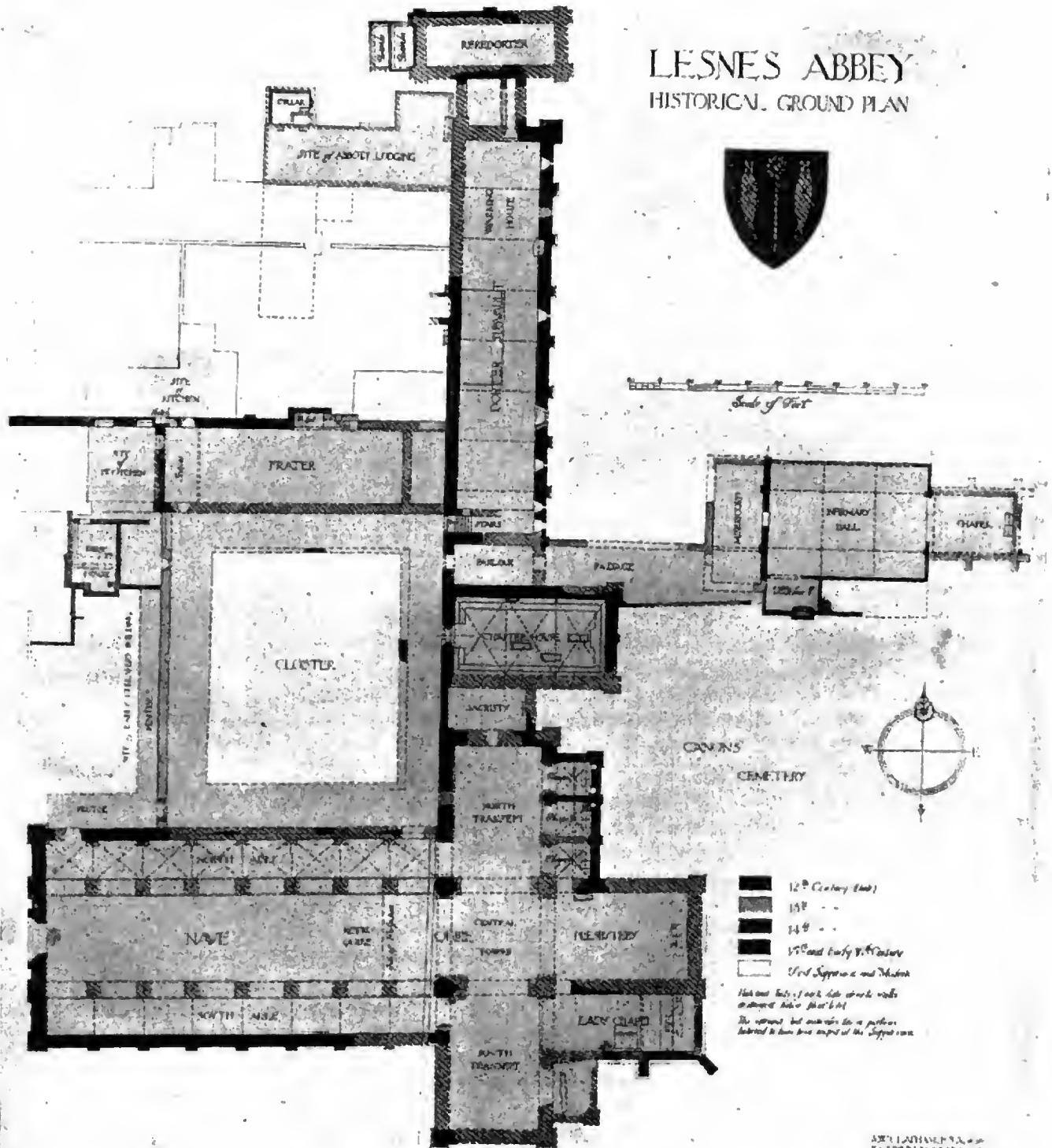
The story of this recent addition to the list of such remains is told to us in the lately published monograph, from the Cassio Press, by Mr. Alfred W. Clapham, F.S.A., on the Abbey of St. Mary and St. Thomas the Martyr, for Canons regular of the Order of St. Augustine, at Lesnes, in the parish of Erith, Kent; being the complete Report of the Investigations, Architectural and Historical, carried out by the Works Committee of the Woolwich Antiquarian Society. This handy and workmanlike volume, clearly printed with good margins, lays before us what there is to tell in connection with the subject—a subject which, it seems, happens to occupy a very limited space in the standard works on monastic history.

The author makes good his claim, set forward in the Introduction, that the extensive remains which have been brought to light by the recent excavation of the site are amply worthy of a full and complete description. This excavation, he says, was primarily due to the energy and initiative of Mr. W. T. Vincent, President of the Woolwich Antiquarian Society, who in 1909 collected the nucleus of the excavation fund and himself started the work, which went on, mostly under the author's own supervision, until 1913. The result has been the recovery of the complete plan of the church and claustral-block, of the infirmary, and of some subsidiary buildings. Due acknowledgment is made of valuable help in the elucidation of the various features of the plan, afforded by Mr. C. R. Peers, Sir Wm. St. John Hope and others. How full and complete the author's description is becomes evident on our following his pages, aided by the illustrations.

The volume is divided into Part I. History, Part II. The Buildings, and Part III. Objects found, with Appendices and Index; and it is illustrated, from photographs and drawings, by twenty-six plates, some twenty figures and—most important of all—an historical ground plan, in colours, plotted and reproduced to a good scale from the author's own measurements. In this plan the whole story seems to be focused and summed up. Truly the diagram turns out to be a revelation. By the unfolding of this illustration a beam of light is thrown on the subject, suggesting how much in the dark one might be without it even in the presence of the work itself. How often, in fact, for lack of such a clue as this may an architect, visiting old ruins, gaze in a puzzled way on crumbling walling and more or less shapeless mounds, feeling himself for the moment, architect though he be, really but little wiser about the design and make of the edifice than any other sightseer! The recovery of obliterated building-lines and the presentation of them in a survey like this is the work of pioneers in the domain of architectural history, who thereby at the same time are helping also to turn over one corner of a page in our national history.

In this particular case we see how the chief buildings of the establishment, which seem to have been set out by about 1179, consisted of a church, cruciform in plan, with its claustral buildings lying to the north of it, all schemed as a whole on recognised lines, generally speaking, and in point after point recalling parallel examples up and down the country. In some points the resemblances are strikingly close. But these are not confined to comparison with houses of the Augustinian Order only; on the contrary, the church itself, for instance, with its short, square-ended eastern arm, its central lantern, its aisled nave, and its cross arms each furnished with closely-set rectangular chapels out to the east, might pass for a typical Cistercian church of the twelfth century, such as we may see at Kirkstall. For the slightly unusual placing of the cloister with regard to the church there are parallels enough. Amongst others may be named Buildwas and Dore, where, as here, the fall of the land chances to be northward down to the river. Applying equally to establishments of any Order, the vulgar consideration of drainage practically governed the disposition of the entire building, and involved a northward-lying cloister, contrary to the normal placing of this feature, on the sunny side, with protection from the north and east afforded by the higher parts of the church edifice. Herein Lesnes follows its mother-house—viz., Holy Trinity Priory, Aldgate—as shown by a plan of this latter reproduced in the volume from a late sixteenth century survey, by one J. Symonds; and in further accordance with this lead the abbey chapter-house and dorter-range come in their usual positions respectively in relation to the whole, as also does the frater lying parallel with the church, on the north side of the cloister, all in accord with Benedictine precedent, that common basis of so much of the conventual planning in the West.

Out to the east of the dorter-range stands the infirmary, approached through the parlour and by a passage extended from it. The plan of this important adjunct to the house is also on customary Benedictine lines, that is, in the form of an aisled hall, attached to which is a chapel forming an unaisled eastward prolongation; some such building, in short, as the thirteenth century St. Mary's Hospital still in use at Chichester, just a domestic hall with beds in the aisles and a chapel opening out from its



Reproduced from the Coloured Plan in Mr. Clapham's book (half the scale of original).

upper end. Adjoining the infirmary proper, at Lesnes, comes the misericord or flesh-frater, where, as an indulgence, there might be served certain food forbidden in the main frater.

As a matter of fact, in none of the above-named buildings of the abbey does there seem to be any distinctive type followed peculiar to the Augustinian Order, in such sense as we do find in the case of the Cistercian Order, for example, where uniformity ruled so largely as to the character of the building-work and the planning.

Further evidences of the life led within these walls, real touches of the time-honoured art of building to meet requirements and to embody ideals, confront us as we examine this plan in detail. The chapter-house, in which the convent assembled daily, sitting round on the double bench which lined the walls, with their abbot presiding at the east end, is a rectangular apartment that was vaulted in a single span of 26 feet 6 inches; and so can be compared with the rather earlier Augustinian example remaining at Bristol. There being no vestibule to this Lesnes chapter-house, such as exists at Bristol, over which passage-way might be gained on the first-floor level, it follows that the existing stairs down from the dormer to the cloister, at its north-east corner, most likely served not only as day-stairs but as night-stairs also, by which the inmates had to make their way from dormer to church at midnight, for matins. A fireplace in the dormer undercroft indicates the warming-house. The re-re-dormer, out beyond the extreme north end of the dormer itself, seems admirably planned for its purpose, conveniently serving both for monks and for abbot apparently, with a carefully contrived cut-off quite in compliance with sound dictates of sanitary science. The frater is a long ground-floor hall, having the screens at its western end. A fourteenth-century pulpit and a fifteenth-century serving-hatch are features in its north wall, both also indicative of human activities. At no point in all this work does the human interest fail us.

The comparative importance of these finds at Lesnes may be measured by the consideration that, as Mr. Clapham observes, of the conventual arrangements of the Augustinian Order little is known, owing to the fact that but few of their houses have been systematically excavated and examined, and that of their existing remains the domestic buildings have suffered almost complete demolition. He adds that, it may be stated with confidence that their architectural rules, if any such existed, were far more elastic than those governing the Cistercian or Carthusian Orders, and that the general plan conformed very closely to the Benedictine usage. Of their churches, he says, a larger proportion of this Order than of any other were preserved either whole or in part, at the Dissolution, for parochial purposes, having contained parish altars all along; but at Lesnes the abbey church was wholly conventual, and consequently got completely destroyed. The church of this parish, viz., Erith, existed long before the abbey was founded, and has survived it. It is in this very parish church, by the way, that certain of the smaller objects and architectural fragments yielded by the excavation of the abbey site have at last found shelter and safe keeping. Among these is a series of sepulchral monuments and Purbeck marble coffin-lids, dating from about 1200 onwards. Pattern tiles and painted glass also figure in the collection. The chief treasure of all, viz., the fine fourteenth-century effigy of a member of the Lucy family, in armour, partly finished in gesso and with a very considerable proportion of coloured and gilt surface remaining still clear and bright, has rightly taken the place it deserves in the national collection at South Kensington. It is well displayed in the coloured frontispiece of the volume and in photographic plates.

For all that has come to light we have to thank our pioneers who adventured on this quest. Their excavations are again filled-in and little of the building-work remains to be seen above ground; no striking or picturesque architecture here stands up against the sky, yet the work uncovered and carefully surveyed fills a distinct place in the series of examples and, as a fair specimen of the building-work of its day, counts as one more contribution to the evidences of mediæval building and of English work in particular.

Some estimate of this abbey's place in national history may be based on a few known facts concerning it. Founded in 1178, by Richard de Lucy, in expiation of the action that he, as Henry II.'s

Chief Justiciar, had taken against Thomas à Becket, it ran its course for three hundred and forty-seven years until its suppression, with some twenty-four other religious houses, by Wolsey in 1525, who appropriated the revenues for the endowment of his colleges at Ipswich and Oxford. The abbot had been summoned to Parliament in 1265 and again in 1294. In 1300 Edward I. was a guest, on his way to Canterbury. Canterbury pilgrims can hardly have failed to test the resources of the guest-house on many an occasion.

The building's place in architectural history may well be marked by our remembering that this is a work begun just about the time that William the Englishman was bringing into shape his completion of the great eastward extension of the cathedral at Canterbury, itself a tribute to the memory of Becket.

These original buildings at Lesnes seem to have served their purpose in the main, throughout their three centuries and a half of life, with only some minor alterations and additions made from time to time. For instance, the western-range appears to have been built, or rebuilt, in the thirteenth century, the Lady Chapel to have been thrown out on the south of the presbytery in the fourteenth, and sundry small works executed in the fifteenth. Since the suppression the buildings have served as a quarry; the abbey barn was demolished so late as 1860; and even to-day, we are told, the site of the pulpitum cannot be examined, as it is covered by a piggery.

Assuredly, in more senses than one, this illustrated Report, as a piece of research, may be pronounced a good, all-round bit of spade-work; and how high a value must be put upon spade-work we are learning every day.

WALTER MILLARD [A.].



LESNES ABBEY: CHAPTER HOUSE, JAMB OF DOORWAY.

WILLIAM LEIPER, R.S.A., J.P. [F.]

Born 21st May 1839; died 27th May 1916.

Through the death of Wm. Leiper, R.S.A., a noted "Scots" architect, the profession has lost a distinguished member, a true artist, and an outstanding personality. He was no mere practitioner, but throughout his career remained a student and an artist first, last, and all the time. He had a keen and critical eye, a fine sense of proportion, a facile pencil, which with his innate artistic gifts and imagination gave him powers of design far above the average and rendered his work always interesting. Having been a close student of "old work," both at home and on the continent, of which he made copious sketches, its influence was revealed in all his work. His natural sympathies were strongly towards "Gothic" rather than "Classico," though on occasion he could handle that also. All through his career he held strongly and consistently to the artistic rather than the commercial side of the profession. An architect's office, in his view, should be more of a studio than anything akin to a factory for the mere production of drawings as from a mill by turning a handle. That to him was "anathema." A close and conscientious study of every feature, as an artist studies his picture, combined with a painstaking working out of every detail to its minutest degree, characterised all his work, which to some was a source of inspiration, its qualities being generally recognised and acknowledged.

He had not many hobbies, his profession affording ample scope for his time and energies, but from his early youth he took a keen interest in photography which he never lost. For a time he was a votary of the wheel, and with one or another of his friends had many pleasant cycle runs through the beautiful country so accessible from Helensburgh, where for over 40 years he had resided.

In 1909, after a protracted illness, and having attained the allotted span of threescore years and ten, he retired from practice, and during these seven years had lived quietly, taking a keen interest in his garden, particularly in rose culture, and with marked success.

Being of a shy and retiring disposition, he took no very prominent part in public affairs, but for a number of years was a justice of the peace for Dumbartonshire. He was an office-bearer of St. Columba United Free Church, and for many years took special interest in its musical affairs.

He remained a bachelor, but had numerous friends; his residence, "Terpersie," the place-name of his ancestors in Aberdeenshire, was a favourite rendezvous where they frequently, some more or less regularly, dropped in to have a chat. He was a voluminous reader, very catholic in his tastes and outlook; with a keen interest in all current topics, he could discuss many subjects, his genial personality and versatility attracting not only younger members of his own but also various members of nearly all the

other professions. Painters, bankers, clergymen, lawyers, medical men, etc., all found the atmosphere of his bachelor quarters congenial, and in him a sympathetic and responsive auditor as well as an interesting conversationalist, yet critical withal. He had no near relations to mourn his departure, but will be greatly missed by his wide circle of devoted friends, who esteemed him as an artistic and cultured gentleman. He was the last of his stock, and now his ashes have been gathered to his fathers.

Born in Glasgow in 1839, his progenitors hailing from Aberdeenshire, William Leiper received his general education at the High School of his native city. He gave early indication of the artistic temperament, and architecture was selected as the most suitable profession for the employment and development of his marked artistic abilities. He became a pupil of Messrs. Boucher & Cousland, Glasgow; afterwards proceeding to London, where for some years he served, first with Mr. Wm. White, F.S.A., and later with Mr. J. L. Pearson, R.A., both of whom he held in high esteem for their great abilities, and learned much that was invaluable in his own practice; later gaining practical experience while he acted as resident draughtsman on some ecclesiastical work in Dublin. Returning to Glasgow, he took part in an open competition for Dowanhill Church, and was successful, thus securing his first commission soon after attaining his majority—a notable achievement indeed.

Work flowed in on him plentifully, Cornhill Mansion, Biggar, and Dunbarton Burgh Halls and Academy being amongst his earliest works. These bear evidence of the influence of the late Mr. Wm. Burges, whose work Mr. Leiper greatly admired. Soon after this period another phase appears in some of his smaller houses, where a distinctly Greek touch is shown, most probably traceable to his intercourse and friendship with the late Mr. Alex. Thomson, of Glasgow, locally known as "Greek Thomson," so consistent was he in the application of Greek for all classes of building.

Very soon, however, Mr. Leiper began to assert his own individuality and independence of thought, as shown in such a group as (a) "Colearn Castle," Auchterarder, Perthshire; (b) "Cairndhu"; (c) "Dalmore," Helensburgh; and (d) Burgh Halls, Partick. (a) Colearn Castle, erected about 1869-70, is a most complete and successful adaptation of "Old Scots" to modern requirements. A pen-and-ink drawing from Mr. Leiper's own hand was exhibited in the Royal Academy during the 'seventies. It was well hung and very favourably criticised. (b) Cairndhu, erected at Helensburgh (for the late Lord Provost Ure, of Glasgow) soon after Colearn was completed, is entirely different in style. Here the French château has been adopted as a type and handled with much refinement. (c) Dalmore, Helensburgh: here we have another rendering of "Old Scots" entirely different in type from Colearn, though equally successful, the motif for the disposition of some of the main features being derived from Newark Castle, Port Glasgow.

(d) Burgh Halls, Partick : here again French art has been laid under tribute and handled in a refined and scholarly manner with most pleasing and satisfactory effect.

Passing reference has been made to Dowanhill Church, gained in open competition. This is situated in the western outskirts of the city on rising ground which emphasises the dominating effect of its lofty spire, simple in outline and well proportioned. This was followed by others at Brechin and Lanark respectively, smaller and without spire or tower, but having simple bell turrets ; another at Victoria Park, Whiteinch, different in type of plan, having two aisles with pulpit placed in line, or nearly so, with central piers. These smaller churches are all in severely simple Gothic.

Campbell Church, Queen's Park, Glasgow, is in French Gothic, the spire being modelled on St. Pierre, Caen. It rises to a height of about 200 feet, beautifully proportioned, simple and graceful in outline, and admittedly one of the finest spires in Scotland, the belfry stage being particularly fine.

Hyndland Church, Glasgow, is in the same neighbourhood as "Dowanhill," but built at a much later date (1885-6) and of a later type of Gothic, Scots Decorated. It is designed with central nave, two aisles and transept, but without clerestory. Only the lower part of the tower has been built ; the completion of the spire is a work of the future. There is a "bigness" in the whole design that impresses, combined with beauty of detail, vigorous yet refined. Internally it is lofty and spacious, and there probably the sense of "bigness" referred to is most pronounced. The arcades have beautifully carved stone caps, executed by McCulloch & Co., London. Without mentioning in detail some smaller churches and others remodelled, before passing from the subject special reference must be made to St. James's, Kilmacolin, which was the last church he designed. It has a central nave and aisles, chancel with transept, the latter affording accommodation for organ and choir vestry. The choir stalls occupy the front part of chancel, while the elders' seats and communion table, on a slightly higher level, are in the rear. The interior is wholly finished in stone, the walling generally of pointed rubble, the chancel in cleaned or dressed courses. The tower, of saddleback type, was the gift of a generous donor, erected as a memorial to his deceased wife. It is "Franco-Scotto" in treatment, with open geometric and cusped parapet supported on carved corbelling. The crocketed gables, pinnacles, and stone roof of stair turret surmounted with figure of "St. James," together with central fleche, give a rich, pleasing, and picturesque skyline to a really fine tower, and situated as it is on rising ground it forms a striking landmark.

Church decoration was one of Mr. Leiper's strong points, his fine sense of colour giving him special powers in this direction. In addition to some of his own churches, where colour decoration came into play, he was called upon to design appropriate

schemes for others affording less opportunity for satisfactory treatment. Amongst these may be mentioned Park Free Church and West Parish Church, Helensburgh, where, with very unpromising conditions, marked success was achieved in both.

It may be appropriate here to mention that, after being in practice for a number of years, he relinquished architecture, disposed of his practice, and took up painting. Proceeding to Paris, he first attended the studio kept by Julian, where many other young Scotsmen were studying. Later he attended the studio of his friend Mr. Robert W. Allan, who had formed an afternoon class to draw from the model. Some of the other students attending, and personal friends of his own, were Millie Dow, Arthur Melville, A. D. Reid, James Anderson, and an Englishman, E. Detmold. Exactly what interval elapsed before he gave up painting as a profession to resume architecture is not quite clear, probably about a couple of years, but it was to undertake the internal appointments and decoration of the Czar's yacht *Livadia* that he renounced the easel for the drawing-board.

Further notice must now be given to his domestic work, which formed his widest field. To name all his works, large and small, would in itself form a considerable catalogue. Amongst the smaller and earlier might be mentioned a number in Helensburgh, where a considerable proportion of his work is located. "Redholm," possibly so named as being built of redstone ; "Terpersie," his own residence, named after the ancient home of his ancestors in Aberdeenshire ; "Bonnington," now Rhuarden, on the adjoining feu ; "Tordarroch" ; "Aros" Row, built for the late Sir Geo. MacLeod ; "Castlepark" and "Wheatpark," both in Lanark ; "Ruyton Park," Shropshire, and others during the 'seventies and early 'eighties. The "Victoria Infirmary," Helensburgh, and a school at Gavelochhead may be mentioned in passing ; though neither is extensive, each is a model in its way for completeness and fine architecturally. Then in the later group might be named "Ardlus," "Brantwoode," "Clarendon," "Morar Lodge," "Redtower," "Rockbank," a group of three small villas, "Polkemmet," all in Helensburgh, the last-named being his latest work in simple English domestic. Others in various parts might be cited, such as "Moredun," Paisley, a "Leiperian" blend and almost a mansion in size ; "Piersland," Troon, English domestic, largely half-timbered ; "Ganavan," Oban, built of local grey granite, timber oriels, half-timbered gables, of simple domestic character ; "Langgarth" and "Deroran," both in Stirling, the former a very complete and successful rendering of "Old Scots" with a quaint gate lodge, "Deroran" with gate lodge and stable offices, all of "English Domestic" ; "Uphill," at Bridge of Allan, a few miles distant, is also of the last-named type. "Auchenbothie," Kilmacolin, is in pure "Old Scots," with a tower and stair turret finished with typical bell-shaped roof. Other smaller houses there are some "Scots," others "English," or a

blend of both, of various sizes and types, but all showing a variety and freshness of treatment, and bearing in marked degree the impress of his personality; so much so indeed that gradually his work evolved what could be recognised and legitimately defined in what has incidentally been referred to as "Leiperian," "Tighnabruach House" coming under that category. Amongst his more important mansions are the following—viz.:

"Kinlochmoidart," Inverness-shire, where, by the way, "Prince Charlie" on one occasion landed. A fine, stately and dignified pile in "Old Scots."

"Kelly House," Wemyss Bay. This he personally considered his best work, at least in this field; a blend of Scots and English, situated on an elevated site, it had a commanding appearance and extensive views of the beauties of the Firth of Clyde and western mountains. During the "Fiery Crusade" of the Suffragettes, and shortly before the outbreak of war, it fell a victim to their evil machinations, and now stands in ruins. It was built of red stone quarried on the estate, and the roofs covered with Elterwater green slates and stone ridges.

"Ballimore," Lochfyne, Argyllshire: an existing mansion was remodelled to some extent, a new wing and other features added entirely transforming its aspect.

"Knockderry Castle," Cove, Dunbartonshire: here again, as at the last-named, additions to an existing building formed the subject, an extensive new wing, comprising music-room, library, bedrooms, etc., being added. Situated on a promontory and rising directly from an elevated rocky site, full advantage was taken of the opportunity thus afforded for a bold and vigorous handling of the national style. The general lines, simple and telling, combined with robust detail, produced results as pleasing and satisfactory architecturally as they were appropriate to the situation and surroundings. This work was illustrated some years ago in the Royal Academy by a black-and-white drawing, the criticism being in appreciative, almost flattering terms.

"Glendaruel," Argyllshire: a very fine example of "Scots Baronial," and the last mansion house designed by Mr. Leiper. It was built adjacent to the old house, which it linked in and absorbed, giving added interest internally through the varying levels of old and new. The stable offices, home farm, and various other buildings on the estate form an interesting group. Here we must now pass from the private work to close with a reference to one or two public buildings—viz.:

Messrs. Templeton's carpet factory, facing Glasgow Green. The firm, as patrons of the arts, resolved, not alone in the interests of the workers, but also of the citizens, to erect instead of the ordinary and common factory something of permanent architectural interest and beauty. They gave Mr. Leiper a free hand in designing the fronts exposed to public view, and, after ascertaining the cost as against the ordinary factory, resolved to spend the difference in the public

interest, as already indicated. "Venetian Gothic" was adopted as the style, executed in rich red terracotta brick as a basis, with varicoloured glazed brick, "Faience," and touches of brilliant mosaic judiciously introduced. The principal western front seen on a summer afternoon is rich and resplendent in brilliant and harmonious colour. In point of design and as a piece of architecture and specimen of decorative brickwork nothing finer, in the opinion of competent critics, is to be found outside of Italy.

While speaking of colour, reference might here be made to the scheme of coloured decoration for the Banqueting Hall of Glasgow's Municipal Buildings, designed by Mr. Leiper and carried out under his personal supervision. (Note.—Mr. Leiper had nothing to do with the buildings themselves.) It is only within recent months that the last series of decorative panels was completed. It was to see these preliminarily, before being finally fixed in position, that he paid a special visit, and unfortunately his last, to Glasgow in October 1915. The directing and supervising of these panels formed really the last work he undertook in a professional capacity, and the decoration of the Hall as now completed forms no unworthy record of his skill and ability as a master of colour.

There remains but one other example of his public work still to be mentioned, and, indeed, the only specimen unfortunately in the city, to the lasting shame of Glasgow be it spoken—that is, the "Sun Office" building at the corner of Renfield and West George Streets. This is a fine example of "François Premier," with "Leiperian" touches of Scots here and there. The interior of the public office is very fine with its high teakwood panelling; beautifully carved door heads, marble inlaid frieze of varied colours arranged in panels, all flush, and finely carved fireplace in various marbles and alabaster, combine to give it a richness rarely surpassed in a business office. This building was exhibited in the Paris Exhibition of 1900 and awarded a silver medal.

A few further notes in conclusion. Mr. Leiper was an original member of the Glasgow Institute of Architects, having joined in 1868. He was a Member of Council on several different occasions. During 1888–1890 he was Vice-President, and the following term (1890–1892) President. In 1914, in recognition of his distinguished career as an architect, the Institute conferred on him honorary membership. For some years he was a Governor of the Haldane Trust, connected with the Glasgow School of Art. In 1881 he became a Fellow of the Royal Institute of British Architects. He was elected in 1891 an Associate of the Royal Scottish Academy, and in 1896 a Royal Scottish Academician. He has not been unmindful of such recognition, for, besides leaving a sum of £500 to their funds, he also bequeaths to the Royal Scottish Academy two very fine portraits, one of his own mother, by the late Wm. McTaggart, a personal and lifelong friend; the other of a French lady, by Coutour.

WM. HUNTER McNAB [F.]

MAJOR PHILLIPS FLETCHER, D.S.O.

Major Herbert Phillips Fletcher, D.S.O. [F.] (Middlesex Hussars), attached to the Royal Flying Corps, who died on August 3rd from injuries received while on duty at Hounslow, was a son of the late Professor Banister Fletcher, M.P., D.L., J.P., &c., and was born 27th February, 1872. At the outbreak of the war he was with his regiment, the Middlesex Hussars, and went out with it to Egypt. He was then seconded to the French, and did reconnaissance work in Asia Minor, Syria, and Arabia on French seaplanes for some months, and was awarded the Croix de Guerre, both military and naval, for conspicuous bravery under fire. He was afterwards the Officer Commanding a British Observers' School started at Port Said, and returned to England to take his pilot's certificate for future work with the Royal Flying Corps.

Educated at King's College, London, where he gained the Gold Medal in the Architectural and Engineering course, he passed the R.I.B.A. Final Examination and became an Associate in 1889 and was elected to the Fellowship in 1902. In 1904, having been awarded the Godwin Medal, which carries with it a Bursary of £65 to be spent abroad in the study of modern architecture, he crossed the Atlantic for the purpose of visiting and reporting upon the Great Exhibition held at St. Louis in that year. How excellent a use he made of his opportunities is well brought out in the admirable Paper recording his impressions of the Exhibition read at a General Meeting of the Institute in the following year [JOURNAL, 11th March, 1905]. The Paper as he delivered it, with its interesting series of lantern illustrations, showed him to be possessed of a rare fund of wit and humour, and demonstrated in a very special way his remarkable powers of observation and description.

Major Fletcher was a Fellow of the Surveyors' Institution, an Associate Member of the Institution of Civil Engineers, a Barrister-at-law of the Middle Temple, and partner with Mr. Banister F. Fletcher [F.] in the firm of Messrs. Banister Fletcher & Sons, of 29 New Bridge Street, Ludgate Circus, E.C., which firm was founded by the late Professor Banister Fletcher over fifty years ago. He was also one of the Surveyors to the Board of Trade, an Examiner to His Majesty's Civil Service Commission, Architect and Surveyor to the Worshipful Company of Carpenters, Technical Adviser to six of the associated City Companies, and Director of their Trades Training Schools in Great Titchfield Street, W. He was also Surveyor to the Justices of the Blackheath Division, and was formerly a Lecturer on the staff of King's College, London.

Major Fletcher had travelled considerably in Europe, the United States and Canada, and was sketching in Spain with Mr. Seymour Lucas, R.A., when they were unfortunate enough to be in the historic railway accident at Burgos in 1891, these two

being the only Englishmen who survived the disaster, though Major Fletcher had both legs broken and suffered other injuries.

Major Fletcher had been architect with his partner for many public buildings and private houses in the metropolis and in the country, including King's College Schools, Wimbledon, and alterations at King's College, London, and at Carpenters', London Wall, and the erection of numerous banks, schools, churches, city buildings, warehouses, factories, &c., &c. He was joint author of "The English Home," "Architectural Hygiene," "Carpentry and Joinery," "Arbitrations," "Dilapidations," "Quantities," "London Building Acts," "Valuations and Compensations," "Light and Air," and other text books.

Major Fletcher married Lydia, only daughter of the late T. T. Lindrea, Esq., J.P., of Westbury-on-Trym, Gloucestershire. He lived at Park House, Marden, Kent, and was a member of the Cavalry, Pegasus, and various golf clubs. He was formerly Deputy Master and joint huntsman of the North Bucks Harriers, and was also fond of shooting, sailing, and golf. Those who knew him admired the full life he lived. With his many engagements he did his work to the top of his ability, and was successful in all he undertook. The keen way in which he took up his various military duties was in line with the rest of his work. Not the least of his good qualities was the hold he had on his friends, who feel his loss and think of him as a gallant gentleman. His death was due to an accident, but he died on duty, and his life was given for his country as surely as if he had fallen on the battle-field. His honours, as far as the British Army is concerned, are posthumous, but his many friends will have read with pride and gratification the announcement in the *London Gazette* of the 19th August that the King had conferred upon him the Distinguished Service Order, "for conspicuous ability and skill in the performance of his special duties, which have been carried out at great personal risk and devotion to duty at all times." All his friends regret that he did not live to enjoy if only for an hour the honour he would have appreciated above all those he had received during his last adventurous days.

H. D. SEARLES-WOOD [F.].

MR. HOWARD CHATFIELD CLARKE [F.] writes:—

I have known the late Major Herbert Phillips Fletcher for many years, and feel that his loss to the profession will not be easy to replace. Endowed with a large amount of common sense which gave him a broad outlook, not only on professional matters, but on life in general, he was particularly easy and delightful to do business with, as he never failed to take the broadest view of matters, and always placed his cards fully on the table. He was in no sense afraid of work, and found time to interest himself in many outside affairs. I have been particularly struck with his work at the Technical Schools, in which he took so

deep an interest. Those of us who knew him well will miss for many a long year his cheery and affectionate friendship.

Sir A. BRUMWELL THOMAS [*F.*] writes:—

I was very grieved to hear of the death of Major Phillips Fletcher, whom I had known for many years. His was a very special phase of architectural practice, and one that with his legal qualifications he found great pleasure in. To most architects the legal side of practice and the rights and penalties affecting building are distressing, but to Phillips Fletcher with his trained legal mind this branch of practice had a peculiar fascination. It is a fighting career, like all Bar work; and curiously enough, like practice at the Bar, it brings a high standard of courtesy into the fight. And so I found him, always conscientious and thorough in his work, and always striving to put his case fairly and squarely. His qualifications brought him important duties at the Front, and those of us who had seen something of his work in his military career found it admirably done, as we expected it would be. It was work that required great concentration of mind, and above all it had to be exact and dependable. The French and English honours which came to him testify to the efficiency of his service and the appreciation of the higher command. His loss is a very severe one to us all, and must be especially so to his devoted brother and partner, Mr. Banister Fletcher.

LIEUT. ALICK G. HORSNELL.

Architecture has suffered a very real loss by the death in France of Lieut. Alick Horsnell. He worked for some five or six years in my office, and I had the very highest opinion of his talents. He was a man of strong character and marked individuality, with a perfectly clear vision and definite convictions as to the relation of modern architecture with modern life. Although only on the threshold of his career, he already had a marked influence on the men of his generation, who felt that not only was he an incomparable draughtsman and untiring worker, but that he had the real fire of genius and the power to inspire and lead others. There is no doubt that, had his life not been cut short, he had before him a most brilliant future.

ERNEST NEWTON, *President.*

Alick Horsnell received his early training as an architect in Mr. Chancellor's office at Chelmsford, and his first success was the winning of the Architectural Association Travelling Studentship. Later he was for some time assistant in the office of Mr. Ernest Newton, A.R.A., and captured the two most coveted prizes for design offered by the Institute, the Soane Medallion and Travelling Studentship, and the Tite Prize. In both competitions his work showed a maturity of thought and knowledge of detail very remarkable in a

man of his age. A short time before the outbreak of war he began private practice, and it seemed as if his efforts were destined to meet with a great and instantaneous success. He was placed first in a competition for some municipal buildings in the North of England, and no doubt would have carried them out at the end of the war. He was one of the few architects chosen from the preliminary competition to submit designs for the Board of Trade offices in Whitehall, and he had also other successes.

Alick Horsnell was undoubtedly well ahead of any of his contemporaries in the architectural profession, both in his mastery of design and his powers of expression. He was certainly fortunate in the training he received, and unquestionably he worked hard at his vocation, but there are hundreds of men in the same profession who were as well trained and who worked equally hard without a tithe of his promise of success. He was the happy bearer of the spark of genius which lighted his path and allowed him to step out confidently ahead of his fellows. His unerring instinct in matters of taste enabled him to design in the manner of to-morrow rather than follow on the lines of yesterday, while his gift of brilliant draughtsmanship gave him the power of presenting his ideas in the most attractive form. He was a man of scholarly and somewhat retiring disposition, and it is clear to those who knew him at all that his enlistment, some eighteen months ago, was brought about by his keen sense of duty and not through any love of adventure. Had he lived till the end of the war to take up his work where he left it, there seems little doubt but that he would have won his way to a foremost place among the architects of the day.

ARTHUR BARTLETT [*F.*].

CAPTAIN EUGÈNE BOURDON.

Eugène Bourdon, B.A., Director of Architectural Studies and Professor of Architectural Design in the Glasgow School of Architecture, Staff Captain of the 78th Brigade of the French Army, was killed at the Battle of the Somme on the evening of 1st July while acting with the British forces, rejoicing in the great success of that day and full of hope for the morrow.

When Professor Bourdon joined the Glasgow School of Architecture in 1904, he entered upon a task of great difficulty. The Royal Technical College and the Glasgow School of Art were entirely separate institutions, working in widely different domains which touched only in the field of architecture. Each institution carried on its own courses of study without reference to the other, but the authorities of both had realised that this plan was not only wasteful of energy and of money, but involved a loss in effectiveness, as it was quite clear that the two institutions working together and making full use of their joint resources could organise a school of architecture of the first rank, more comprehensive in scope than either could

provide alone. The two institutions, therefore, resolved to co-operate in the support of a joint school of architecture; but while the desirability of such a scheme was evident, it was also obvious that many obstacles must be overcome before it could be made a success. It was this difficult task of organisation that Professor Bourdon was called upon to undertake. He had to create an *entente cordiale* between the two institutions, to arrange with the several professors for the fulfilment of the duties for which they were specially fitted, to make the best possible use of the wealth of material at his disposal for the teaching of science and art in their application to architecture, and to produce out of these heterogeneous elements a new and virile organisation worthy of the respect of the professional architects of the West of Scotland, and one which would command their support in the training of architectural pupils for professional life.

His distinguished course at the *Ecole des Beaux-Arts*, followed by the filling of an important Government appointment, and subsequently by the successful practice of his profession independently in Paris and the United States, had fully shown him to possess the necessary technical qualifications, but these alone would have been insufficient had they not been supplemented by the sincerity of purpose and perseverance, as well as unflinching tact and organising ability, which enabled him to realise the high ideals he had set before himself and his colleagues. He has not lived to see the fruits of his labours fully gathered, but he has placed the Glasgow School of Architecture on a sound foundation, and has infused into the teaching of his subject a spirit and methods whose influence will long have effect upon the development of architectural education in Scotland. His many students thankfully acknowledge that they owe a debt of gratitude to the inspiration of his teaching.

Professor Bourdon was devoted to his profession, but he was before all an intensely patriotic Frenchman, and for many years he rejoined his Army each summer for several weeks' service. He responded at once to the call to arms when war was declared, and his unflinching courage and conspicuous ability gained for him the highest recognitions. He was twice mentioned in Army Orders, was awarded the *Croix de la Légion d'honneur*, the *Croix de Guerre*, and our own Military Cross, and had been recommended for the rank of *Chef de Bataillon*. His death is a great loss to the Glasgow School of Architecture, but he gladly gave his life for the country he loved, and he died, as he had lived, a Christian gentleman.

H. F. STOCKDALE,

Director, Royal Technical College, Glasgow.

EDWARD THORNTON [F.].

News of the sudden death of Edward Thornton [F.] came as a great shock to his many friends, including myself. To know "Ted Thornton," as his friends

familiarly termed him, was to like him; to be his intimate friend was to love him. He was deservedly popular, for a more gentle or kindly man it would be hard to meet with. He died at Calcutta on 12th June 1916, at the early age of 47. The cause of his death was cerebral hæmorrhage. He was buried in the cemetery on the Lower Circular Road, Calcutta, with military honours, owing to his connection with the Veterans Company of the 1st Calcutta Volunteer Rifles, who furnished the firing party and marshalled the procession, which consisted of detachments of all the troops in garrison with their bands.

Edward Thornton was the third son of Sir James and Lady Thornton, who were prominent figures in the days of the Indian Mutiny, Sir James having marched to the relief of Arrah. Born on the voyage home from India, Edward Thornton spent his early days in Putney and Horsham. He was educated at Queenwood College, Hants, and King's College, London. He served his articles with Mr. Rowland Plumbe [F.], previous to which he attended a year's course at the forge, with the object that knowledge thus gained would serve well in case he might find a career in India or the Colonies—as he eventually did. Immediately upon the termination of his articles Edward Thornton set up in private practice at 7 Great College Street, Westminster, now demolished, where he and the writer joined hands in sharing offices and assisting one another for some five years, at the termination of which time he went to Calcutta, where he remained for over eighteen years, and died in harness. Almost immediately after settling down in his new home he came to the front, as will be recognised by the works he designed and carried out, foremost among which are: The Palace for the Maharaja of Tipperah, the very beautiful Mysore Memorial Temple at Kalighat, the throne in memory of Bishop Jackson in Saint Paul's Cathedral, Calcutta, and the work to the tower and spire of St. Mary's Church, Bhowanipore. Other works, many of note, are the new Calcutta Club, the Chartered Bank, considered by many to be his most successful work in the city, Messrs. Martin and Company's premises, the Esplanade, and Park Mansions—all in Calcutta—and the Post Office at Lahore, and the European Lunatic Asylum, Ranchi, but recently completed.

Edward Thornton was a good water-colourist, and a gifted sketcher in black and white, besides being a clever worker in metals and enamels and being possessed of considerable literary ability. He was a great admirer of, and benefactor to, the native artists and craftsmen of India, whom he encouraged in every way; to hear him explain their works—of which he possessed a host of examples—was a treat of no usual order.

If, as a personal friend, one may express any appreciation of his work as an architect, it is the writer's opinion that he displayed considerable ability in assimilating the Indian native style, and in applying

what was appropriate from works of the past and the living traditions of the craftsmen of India in the design and construction of buildings of modern character. He helped to improve modern architecture in India and to uphold the status of the architectural profession there.

A. HERON RYAN TENISON [F.].

THEODORE KNOLLES GREEN [A.].

Theodore Knolles Green, our oldest Associate, died at his residence, "Leylands," Ellerdale Road, Hampstead, N.W., on the 23rd July, aged 84. He was descended from an old Lancashire family, whose estate comprised a large part of the present town of Leylands. His father, John Green, was a well-known inventor of musical instruments, one of which, the seraphin, was largely used and exported before the invention of the harmonium. Mr. Theo. K. Green was born in Soho Square when it was a new and fashionable suburb, and he had a vivid recollection of a servants hiring fair held there, and also of the erection of Messrs. Crosse & Blackwell's first factory, which spoilt the rural surroundings of his day.

He was articled in Bristol to a Mr. Gingell, who did a very large amount of competition work, and committees were not so exacting in those days as to the use of colour, etc. At the conclusion of his articles, he went to Market Harborough, under a Mr. Bland, an architect there, and after a short stay (about 1853) in Birmingham, came to London as assistant surveyor to Clifford's Inn. Later on he removed to 22 Finsbury Place (now called Finsbury Pavement).

He carried out factories at Otley, and other places in the north, but was chiefly interested in designing villas, being among the first to develop property adjoining the Crystal Palace, then in the course of erection, also at Highbury Park. More recently he built some of the first houses in the old town of Hampstead on the Greenhill Estate, which was then approached up a steep bank from the High Street, but which now forms part of Fitzjohn's Avenue.

His work was all in the Victorian Gothic style, and he retained a good deal of the scornful feeling of his student days for the Georgian Classic now so fashionable. And who shall say what our successors will think in another half century as to the merits of the rival schools?

Among his works in London were: St. Barnabas' Church, Harvest Road, N.; The Capital and Counties Bank, at the corner of Threadneedle Street and Bishopsgate Street; Nos. 26 and 27 Farringdon Street, E.C.; Read's Bottling Stores, Kentish Town; Nos. 58, 66, 68 and 70 Finsbury Pavement; "Wilderott," Putney Heath, etc.

His later years were much given up to foreign travel and sketching, and he exhibited several drawings at the Hampstead Art Society.

PERCY GREEN [A.].

THE WELSH NATIONAL LIBRARY.

AN IMPRESSION, BY A NON-PROFESSIONAL VISITOR.

ABERYSTWYTH: August 1916.

From the harbour we get a fine view of Mr. Green-slade's *magnum opus*, "The National Library," sitting in state on the side of a hill forming a south-eastern extension of Constitution Hill. It looks like a piece of a Greek Temple on a Welsh hill, and yet there is a sort of Roman solidity about it. I think its rightness will grow on one. Viewed from one side the building stands out from a vivid green hill topped by a sombre green wood; viewed from the other, its background is an apparently limitless expanse of vivid blue sea. The granite base and the superstructure of Portland stone are a beautiful pearly white, so that instinctively one thinks of Greece and the Parthenon and the Piræus—even I, who have never seen them! The surroundings, of course, are all in the usual builders' mess, except the broad road leading to the Library; and there is the usual notice, "No admittance except on business."

Entering by a side door and ascending a secondary staircase we come into a great hall, extending the whole length of the East Wing and supported by rows of rectangular columns. Walls and columns are now white; they are eventually to be encased in oak panels. The present effect is delightful. The impression I have carried away is one of luminous space, white walls and soft pearl-grey shadows; over all a ceiling beautiful, because its decoration is delicate and simple, and everywhere is a feeling of austerity and strength. In this hall are to be exhibited in cases, etc., prints, maps, and illuminated manuscripts.

The East Wing is at present separated from the West Wing, which contains the Library, by a quad open on one side to Cardigan Bay, with Aberystwyth down in the depths below. This quad will eventually hold a great domed central-hall. On the north side the great wings are linked by galleries in the nature of a curtain wall. The Library, in the West Wing, is now being arranged ready for the opening next week. The little galleries or balconies by which you get at the books are only temporary arrangements of wood, to be replaced eventually by bronze. The lighting is excellent.

Outside, in the aforementioned quad, where will be the chief entrance, the arrangement of a broad flight of steps is very noble, even with their present unfinished surroundings. Another thing that struck me was the north façade of what I call the curtain gallery. It is built of blue Staffordshires with Portland facings, and the effect is fine; chiefly obtained by the bold simplicity of the Portland mouldings, the carefully selected tint of the blue Staffordshires, and the excellence of the workmanship.

Books Received.

The Greek House: Its History and Development from the Neolithic Period to the Hellenistic Age. By Bertha Carr Rider, M.A., D.Litt., So. Camb. 1916. 10s. 6d. net. [University Press, Cambridge.]



9 CONDUIT STREET, LONDON, W., 26th August 1916.

The R.I.B.A. Record of Honour : Thirty-third List.

Fallen in the War.

FLETCHER, Major HERBERT PHILLIPS, D.S.O., *Croix de Guerre* [F.], Middlesex Hussars Yeomanry, attached to Royal Flying Corps. Died through an accident to his flying machine on 1st August.

PILLING, Captain PERCY CUNLIFFE [A.], Loyal North Lancashire Regiment. Died of wounds.

AITKEN, Second Lieut. ANDREW DANKINE [A.], 2/1st Lowland Field Company, R.E. [T.], Egyptian Expeditionary Force. Killed in action in Egypt on 4th August.

HENDERSON, IRVING, 16th Northumberland Fusiliers. Killed in action in France on 1st July.

Mr. Irving Henderson was a son of Alderman Henderson of South Shields, and a student of the Northern Architectural Association. He served his articles with Mr. J. H. Morton [F.], of S. Shields, and was afterwards Surveyor in the Inland Revenue Valuer's Office at Gateshead.

HORSNELL, Second Lieut. ALICK GEORGE [T.], *Prizeman* 1906, *Soane Medallist* 1910, Suffolk Regiment. Killed in action in France.

BOURDON, Staff Captain EUGÈNE, 78th Brigade, French Army, Director of Architectural Studies and Professor of Architectural Design in the Glasgow School of Architecture. Killed in action.

Military Honours.

FLETCHER, the late Major HERBERT PHILLIPS [F.], awarded the D.S.O. "for conspicuous ability and skill in the performance of his special duties, which have been carried out at great personal risk and devotion to duty at all times."

The Ministry of Munitions and Control of Building.

The Ministry of Munitions announce with reference to the New Order in Council regulating building [JOURNAL, 29th July, p. 294] that work which was in progress before 20th July need not be stopped pending the granting of a licence. Any building commenced before that date should be continued until such time as a licence should be definitely refused. The Ministry explain that in making the Order there was no desire to restrict building unless a national purpose could

thereby be served. The principal purpose was to limit the use of structural steel. A further purpose was to assist the Ministry in obtaining such building labour as was urgently required upon munition factories.

The Telegraph (Construction) Bill.

The following correspondence relating to the Telegraph (Construction) Bill has passed between the President and the Postmaster-General :—

9 Conduit Street, W., 7th August 1916.

To the Rt. Hon. J. A. PEASE, Postmaster-General,—

SIR,—The Telegraph (Construction) Bill has only just been brought to my notice, and on behalf of the Royal Institute of British Architects I beg to enter a protest against the extraordinary powers which are therein sought for. Such drastic powers over property should surely not have been asked for without more publicity being given to the proposals, nor should the Bill be passed before the most careful consideration has been given to the arguments which in the public interest, as well as in that of owners of property, may be brought against it.

It appears to me that the future development of land and property may be seriously injured by owners being compelled to submit to the presence of poles and wires upon their properties.

The considerable damage which frequently occurs from the attachment of these poles to the roofs and walls of buildings, as well as their unsightliness, appears to call for very serious and detailed consideration before taking steps to bring into force an enactment the working of which may be very oppressive.

I hope, therefore, that when the Bill reaches the Committee stage a hearing will be given to those whose interests will be so seriously affected if the Bill becomes law.—I am, Sir, yours obediently,

ERNEST NEWTON, President R.I.B.A.

General Post Office, London, 10th August 1916.

To the PRESIDENT R.I.B.A.,—

SIR,—I am directed by the Postmaster-General to refer to your letter of the 7th instant, and to say, as was explained over the telephone last Monday, the Telegraph (Construction) Bill was printed on July 19th and made public in the ordinary way, and he would regret if it was thought there was any desire on his part to forestall representation on the subject. He would explain that the Bill does not originate in any alteration of policy on the part of the Post Office. It has been rendered urgently necessary by a small minority of owners of property in making extortionate demands in respect of indispensable facilities for the maintenance and extension of the public telegraph and telephone services. Since the additional Income Tax and other burdens were imposed by the recent War Budgets the number of such demands has rapidly increased. There are attempts on the part of those making them to evade their share of the public burdens and to transfer it to their fellow citizens. At the same time these persons are enjoying the use of the

public telegraph and telephone services on the same terms as those who make no such attack upon national interests. Labour is not available under present conditions for needless removals of plant nor for the adoption of circuitous routes, where these are available, with consequent unnecessary additions to capital and annual expenditure.

The object of the Bill is only to give a right of appeal against unreasonable refusals and extortionate demands on the part of the public or against unreasonable or undesirable proposals on the part of the Postmaster-General, and it proceeds on the principle that there should be an appeal to an impartial tribunal.

The consent of owners as well as lessees and occupiers must still be sought under Section 21 of the Telegraph Act, 1863. In the event of difference as to whether a consent is unreasonably withheld, the Postmaster-General will only be able to proceed with his works if he gets a decision from the independent tribunal established under Sections 3 and 4 of the Telegraph Act, 1878. This tribunal has proved satisfactory during thirty-eight years and no reason is seen for altering it. The tribunal can refuse the Postmaster-General's application altogether, if it thinks just, and can impose upon any consent "such pecuniary or other terms, conditions, and stipulations as it may think just."

The provisions for the protection of persons interested in property which are contained in the Telegraph Act, 1863, will, except as to the right of appeal conferred by the Bill, remain unaffected, and this has now been made perfectly clear in the Bill itself.

Special protection is given by Section 30 of the Telegraph Act, 1863, as regards development of land and property. The Section confers on any persons interested in any land or building and desiring to build upon or use the land or building in any manner in which it was not actually used when the telegraphs were placed there an absolute power to require the removal or alteration of the telegraphs by and at the expense of the Postmaster-General.

The question of damage is dealt with by Section 7 of the Telegraph Act, 1863, which provides that the Postmaster-General shall make full compensation to all bodies and persons interested for all damage sustained by them by reason or in consequence of the exercise of the Postmaster-General's powers, the amount of such compensation to be determined in manner provided by the Lands Clauses Consolidation Acts, 1845, for the determination of the amount of compensation for lands taken or injuriously affected.

It is hoped that this statement will make it clear that owners, lessees, and occupiers of property will be able to impose all reasonable conditions, and that in particular you will see that there is no ground for your apprehension that restriction will be placed upon building improvement or development.

I am to add with reference to your mention of poles on roofs that it is not the policy of the Post Office to erect heavy overhead lines of exchange telephone

wires. Nearly the whole of such plant in London and other urban areas was acquired from the National Telephone Company. With the engineering methods now available the economy in maintenance charges effected by placing the lines underground counterbalances the heavy cost of underground construction if the number of wires is large. The transference of existing heavy lines to new underground lines was in progress before the war, but it can only be effected gradually owing to the heavy expenditure and large amount of labour required. Where only relatively few wires are concerned the cost of underground construction is prohibitive, and where wires used for long distance telephone calls are involved it is necessary to use aerial lines to obtain the highest electrical efficiency. You will see, therefore, that there is no reason for apprehending any substantial increase in the number of roof standards.—I am, Sir, your obedient servant,

F. G. MILNE,
for the Secretary.

Artists' Rifles Regimental Association: "Artists' Rifles Journal."

The Artists' Rifles Journal, the first number of which is just issued, has been started to keep members of the Corps in touch with the Regiment, and to further the objects of the Artists' Rifles Regimental Association. This latter body has been established, to quote its charter.

(a) To act as a patriotic association for the furtherance and support of British interests in all parts of the world.

(b) To form a centre and rallying point for all past and present members of the Artists' Rifles and the various battalions, cadet corps, or other units or offshoots thereof, and linked or associated corps or organisations, with a view to giving information and assistance to such members that may enable them to find useful and profitable employment or otherwise promote their interests in any part of the British Empire.

(c) To collect and obtain useful information from Colonial, Indian, and other Governments, High Commissioners, Agents-General, Consuls, and other persons in official positions, corporations, companies, firms, and other associations and persons engaged or interested in agriculture, forestry, plantations, mining, engineering, building, or other construction, commerce, manufacturing, or other industrial, commercial, or professional pursuits, with a view to making such information known to and disseminating the same among such members as aforesaid, and to advising them where and how best to find occupation or employment of a character suitable to their individual abilities and calculated to promote the interests of the British Empire, and for the like purposes to employ and pay competent persons to deliver lectures on the nature and conditions of employment in the various Colonies, Dominions, and Possessions of the British Empire and elsewhere and on kindred subjects and matters.

(d) To print, publish, issue, circulate, either gratuitously or by way of sale, at such regular or other intervals and times as may be thought advisable, any journals, magazines, newspapers, pamphlets, or other publications for the information, advantage, and benefit of such members as aforesaid, or otherwise in connection with the objects of the Association.

(e) To act as an employment bureau for such members as aforesaid, and for such other persons (if any) as may from time to time be thought proper, and to find employment for such members and persons in any part of the world, but primarily in the British Empire, and of such a character as

will be useful for promoting the furtherance and extension of British influence and interests.

It is particularly desired to help those who wish to settle in the Dominions or abroad, especially in agricultural or similar occupations. The Association is, and will remain, in close touch with the London representatives of the Dominion Governments, and is enjoying their cordial co-operation. The Royal Colonial Institute is assisting the Association, and has placed at its disposal two rooms at 17 Craven Street, Strand, W.C., which will be used as a small social centre and port of call for members passing through London. The centre is now open, and "Artists" are invited to call there.

The qualification for membership is past or present membership of the Corps or of the former 38th Middlesex Rifle Volunteers or 20th Middlesex Volunteer Rifle Corps.

All past and present members of the Corps and any others who have its welfare at heart are earnestly invited to send a donation, however small, towards defraying the expenses of carrying on the work of the Association. Donations should be sent to the Hon. Treasurers of the A.R.R.A., at the Artists' Rifles Headquarters, Duke's Road, Euston Road, London, W.C.

It has to be said of *The Artists' Rifles Journal* that it is a highly creditable production, well worthy of the distinguished Corps whose name it bears. The illustrations, of which there are several, reproduced from drawings and photographs, and of a character both grave and gay, are excellent, and the Journal is well worth having for these alone. The artists are Colonel Walter C. Horsley, Lieut. A. E. Cooper, Second Lieut. W. Lee Hankey, Cadets F. E. Hodge and W. Rhodes, Sergeants Gerald Ackermann and Edgar L. Patteson, Corporals W. P. Robins and S. C. Strube, and Ernest Blaikley. Mr. J. H. Elder-Duncan, formerly of *The Architectural Review*, is Editor. The Journal is to be issued monthly, military exigencies permitting. The price to members of the Corps is 3d., and to outsiders 6d.

The late Lord Redesdale [Hon. F.].

Lord Redesdale of Redesdale, who died on the 17th August, in his eightieth year, was elected Hon. Fellow of the Institute in 1910. His lordship took considerable interest in the Town Planning Conference held at the Institute in that year, and made a memorable speech at the Conference Banquet. Trained for the Diplomatic Service, Mr. Bertram Mitford, as he then was, spent his early manhood in Russia, China, and Japan. His service abroad ceased in 1873, and he resigned his connection with the Foreign Office. For some twelve years prior to his succession to the title in 1886 he held the office of Secretary to the Commissioners of Works and Public Buildings. The most conspicuous work for which he was responsible during this period was the removal of the equestrian statue of the Duke of Wellington from the top of Sir Decimus Burton's Arch which then faced Apsley House, the re-erection of the Arch, with a much smaller statue of the Duke, at the entrance to Constitution Hill, and the opening out of the space at Hyde Park Corner to relieve the congestion of traffic at that spot. He took a keen interest in gardening, and was much consulted by King Edward over the rearrangement of the gardens of Buckingham Palace. It is to his taste in landscape gardening that we owe the wonderful little dell in Hyde Park. Another work carried out under his direction was the restoration of the Chapel of St. Peter ad Vincula in the Tower, and the removal from the

White Tower of the unsightly modern structures by which it was defaced. He took a great part in the arrangement of the Wallace Collection when it was housed at Hertford House, and was a Trustee of the National Gallery.

CORRESPONDENCE.

Professional Men Wanted for Harvesting.

*The Architectural Association War Service Bureau,
37 Gt. Smith Street, Westminster, S. W.
8th August, 1916.*

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—Last summer I made an offer to the Board of Agriculture to use the machinery of the War Service Bureau for the purpose of raising a body of professional men to assist in harvesting work, owing to the shortage of agricultural labour. Although the offer was courteously received, it was not accepted. I have now, however, been approached with a request to proceed with the matter, and I should therefore be very glad to hear from anyone who is prepared to give at least four weeks of his time to harvesting work.

Arrangements will be made to send applicants for a few days, in the fourth week in August, to a training and clearing station before being placed out on various farms. They will receive board and lodging in return for work while at the station, and when they are placed out on farms they will receive board and lodging and a small wage.

Every effort will be made as far as possible to keep together men who wish to work with each other.

I am sure there must be a large number of members of the Architectural and Surveying professions who would like to assist in this work of very great national importance, and I should be very glad if they will kindly communicate with me immediately.

Yours faithfully,

F. R. YERBURY, *Secretary.*

The Great War Memorial.

22nd August, 1916.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—Many suggestions for commemorating in the Metropolis the Great War have been made, although peace is not yet within sight. As we are a slow-moving people, it is well that this is so. The project that a new bridge at Charing Cross should serve the purpose is a good one, though it need not be specially allotted to Lord Kitchener. The Fund which bears his name for helping the future of our brave men will be the greatest and wisest memorial to him, and one after his own heart, for he never sought individual prominence.

I desire the favour of space to advocate as a most suitable memorial the completion of the scheme for statuary along the Victoria Embankment which was contemplated by the late Metropolitan Board of Works, and shown by chromo-lithographs published 45 years ago, of which I have copies. These bare

pedestals have been a reproach to London, and I have never heard of any plea made or scheme detailed by sculptor or architect in the interim. At present these pedestals are meaningless, and I doubt if any other capital in Europe would have allowed them to remain so long in this condition.

I suggest that, *inter alia*, groups representing each Allied country should occupy the larger pedestals and that a foreign sculptor from each should be asked to design the figure for his particular nation, after we have a definite scheme. His particular work might be something on the lines of the Strasbourg Memorial in the Place de la Concorde. The dominant group might represent Prussian Militarism prostrate beneath an heroic figure representing Nemesis, on the smaller ones a figure of a soldier (type of each Allied nation), not forgetting either the British tar or the Mercantile Marine. Names of the principal battles on tablets could be placed on the die of the pedestals. This scheme would, I suggest, constitute both an International and British memorial, and be a worthy adornment of our capital's grandest avenue, a memorial of heroism in the cause of justice, honour, and humanity, which would be unique, and form, I venture to think, an inspiration for ever to a reborn Britain.

Whether each Allied nation should bear the cost of its own personification is a mere detail. It may be they would be anxious to do so, but in any case the question of cost should not in our old cheese-paring way prevent the realising of such a memorial.

Yours faithfully,

EDWARD W. HUDSON [A.].

COMPETITIONS.

The Federal Parliament House, Canberra.

A Memorandum, dated 8th August, received from the High Commissioner of the Commonwealth of Australia, states that the Federal Cabinet has approved of the resuscitation of the architectural designs competition for the Federal Parliament House at Canberra. Eight prizes, ranging from £2,000 to £250, are offered, the total amount being £8,000. The designs must be submitted by the end of January next. The adjudicators appointed in connection with the competition are:—Mr. George Pool, Australia; Sir John Burnet [F.], Great Britain; Monsieur Victor Laloux [*Hon. Corr. M.*], France; Eliel Saarinen, Russia, and Mr. Louis Sullivan, America.

The Institute has received a cablegram from the Architects of Australia protesting against the holding of the competition until after the war and asking the opinion of the R.I.B.A. and the French Architects on the matter. The Competitions Committee communicated by telegraph with the representative French Societies, and as a result a reply has been sent by cablegram to Australia stating that British and French architects consider it most unpatriotic and unfair to

hold such a competition while architects of the Allied countries are fighting and therefore unable to take part. Representations to this effect are now being made by the Competitions Committee to the High Commissioner of Australia in London and the result will be made known in the professional Press at the earliest possible moment.

NOTICES.

The Kalendar: Changes of Address.

As was announced at the General Meeting of the 13th March last, the Council have decided not to issue the *Kalendar* this year, but to publish instead a small pamphlet to serve as a Supplement to last year's *Kalendar*. The Supplement will contain all the information usually given in the Almanac—dates of General Meetings, Committee Meetings, Examinations, &c.—together with lists of new Members and Students, Members' addresses which have been changed since the issue of the last *Kalendar*, and the names of the Officers and Councils of Allied Societies. Except for the Allied Societies section and for such changes in the Examinations as have been already announced [see *JOURNAL*, 4th March], last year's *Kalendar* will hold good, and should be retained for reference in conjunction with the forthcoming Supplement. Members who have not notified their changes of address are requested to be good enough to do so not later than Saturday, 16th September.

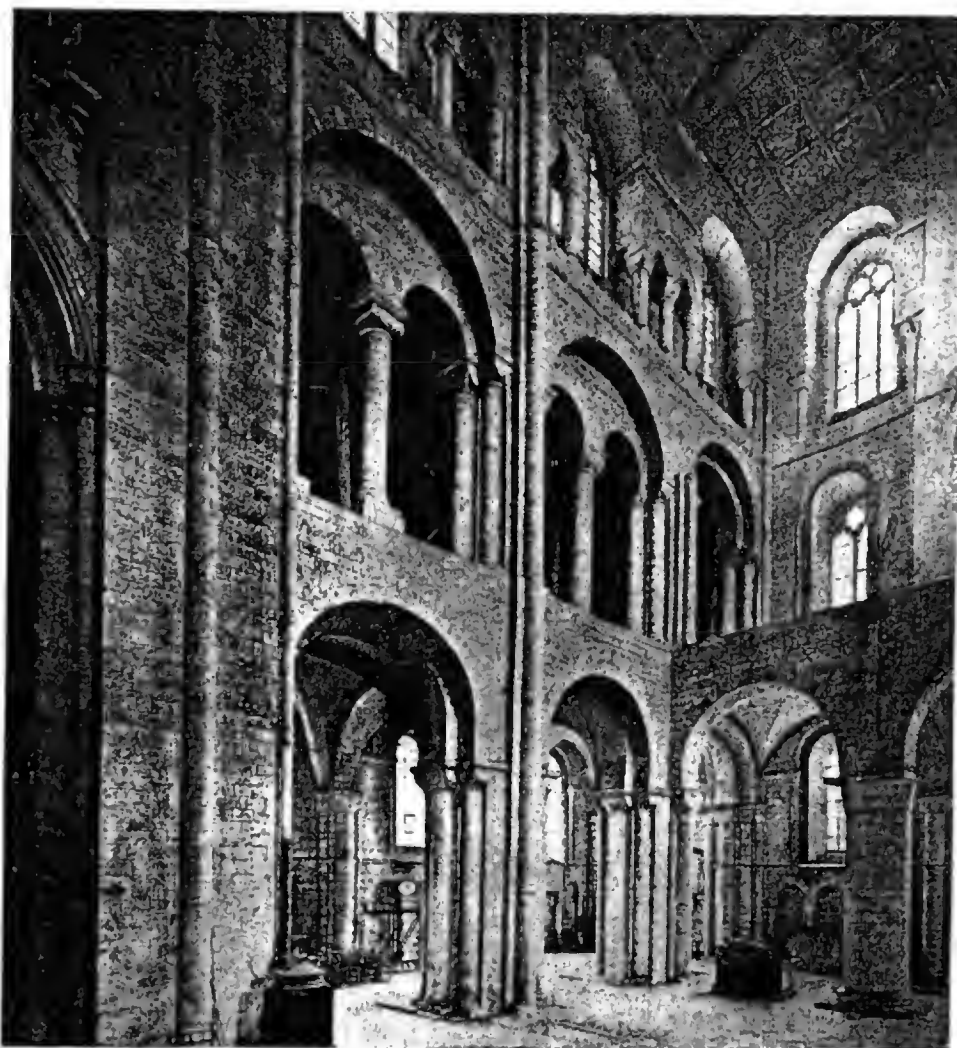
Metropolitan Water Board and Property of Antiquarian or Archaeological Interest.

Mr. M. B. Pilling, Clerk of the Metropolitan Water Board, writes that it is proposed to compile a simple Register of any property of the Board which has an antiquarian or archaeological interest, so that such associations may be borne in mind in any projected dealings with such properties. If at the present time or on any future occasion members have in mind anything which should be noted in this Register, Mr. Pilling would be grateful if they would communicate with him on the subject. He should be addressed at the Office of the Metropolitan Water Board, Savoy Court, Strand, W.C.

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A MEMBER of the Institute, having offices in Bloomsbury, offers the use of a furnished room to an architect during the continuation of the War. Use of telephone if desired. Address "Box 37," R.I.B.A. JOURNAL, 9 Conduit Street, Regent Street, W.



THE AISLE VAULTING OF WINCHESTER TRANSEPT.

By Professor CHARLES H. MOORE, A.M. [*Hon. A.*], late Director of the Fogg Art Museum, Harvard University.

THE transept of Winchester Cathedral is well known as one of the grandest monuments of early Norman architecture in England. Like most other Norman works, it has no high vaulting, nor any proper provision for such vaulting; but its aisles are vaulted throughout, and are of peculiar interest as affording instructive illustration (1) of the character of early Norman vaulting without ribs, (2) of the same vaulting with ribs added later to the groins, and (3) of vaulting that appears to have been entirely rebuilt on groin ribs by Norman craftsmen. The original vaults date from near the close of the eleventh century, but the times of the additions and rebuildings are uncertain, though from the profiling and the jointing of the ribs it would appear to have been considerably after the fall of the crossing tower—which appears to have happened in the year 1107—and could hardly, I think, have been before the second quarter of the twelfth century. The plan of this transept includes, in each arm, an aisle on each side and a return aisle on the end. There are three bays in each side aisle and two bays in the return aisle; thus in both arms together there are sixteen compartments of vaulting.

To the casual eye these vaults appear of but two kinds, and even Willis, in his monograph on Winchester Cathedral,* speaks of them (p. 25) as "plain groined vaults" and "ribbed" vaults respectively, without remarking any points of difference among those with ribs; and he appears to suppose, though he does not affirm, that the ribbed ones were built at the time of a partial reconstruction, which seems to have taken place soon after the fall of the tower. My friend Mr. John Bilson, however, in *The Beginnings of Gothic Architecture*,† says (p. 301) that "in the reconstructed bays . . . the vaults were entirely rebuilt as ribbed vaults," but (on p. 302) he qualifies this by remarking that "in the northernmost bay of the east aisle of the north transept, which would not be affected by the fall of the tower, the vault itself does not appear to have been rebuilt, but the ribs seem to have been added to the original vault, and backed up to the groins." It appears to me, however, that, of the total of sixteen vaults comprised in the whole transept, ten are of the original construction and six have been rebuilt; while, of those that remain of the original work, four have had ribs added under their groins. Let us examine these vaults somewhat closely.

The headpiece to this paper gives a general view of the west side, and a part of the north end, of the north arm of this transept, and shows some of the vaults in their relation to the rest of the structure. The compartments are on plan roughly wide rectangles, and the vaults, like most other Norman vaults, are built of rubble and covered with plaster. Those of the original construction are, in idea, each in the form of two half cylinders interpenetrating at right angles, but there are no strictly cylindrical surfaces, and the manifold irregularities of the work show that they were turned on rude centering. The plan A (Fig. 1) is that of the compartment to the right of the great round column seen in the head-

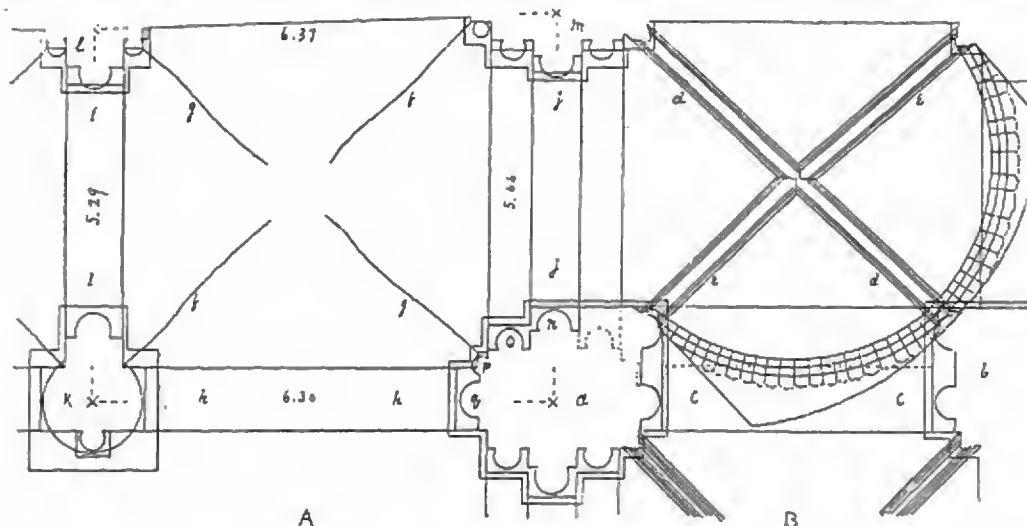


Fig. 1.

piece, i.e., the eastern one of the two compartments of the return aisle. This compartment measures a little more than 5 by 6 metres from centre to centre of the supports, but its opposite sides are of unequal length, as will be seen by the figures given on the plan,‡ and thus, like most other mediæval plans, it is a little askew. The vault is, however, more nearly square than the compartment measured from the centres, because the great width of the arch *j* cuts off a part of its length. It should be remarked that the whole vault is stilted. This is an anomaly, and has no justification on structural grounds, since the arches on the wider spans would naturally be semicircular without stiling. Stiling is need-

* *The Architectural History of Winchester Cathedral*. By the Rev. R. Willis, M.A., F.R.S., &c., published in the *Proceedings of the Archaeological Institute of Great Britain and Ireland*. London, 1845.

† Published in the *JOURNAL* of the Royal Institute of British Architects. Third Series, Vol. VI, Nos. 9 and 10.

‡ These are rough measurements, but they are correct enough for our purpose.

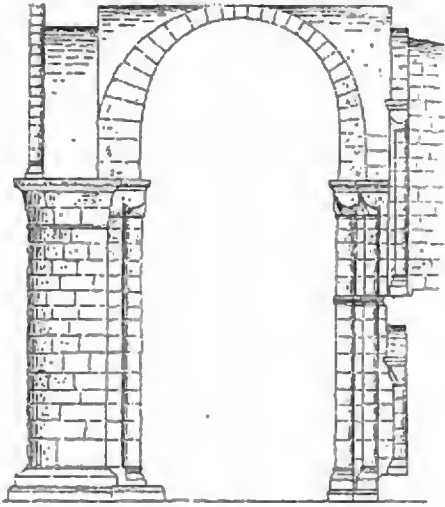


Fig. 2.

on plan, and this groin is on the longer diagonal, but also because it springs at *k* out of the re-entrant angle formed by the archivolt *h* and the transverse arch *i*, as shown in the cross section (Fig. 2), and in the perspective detail (Fig. 3), while the other points of springing are the salient angles of the stiling members; and since these stiling members are of unequal magnitudes, and the one from which this

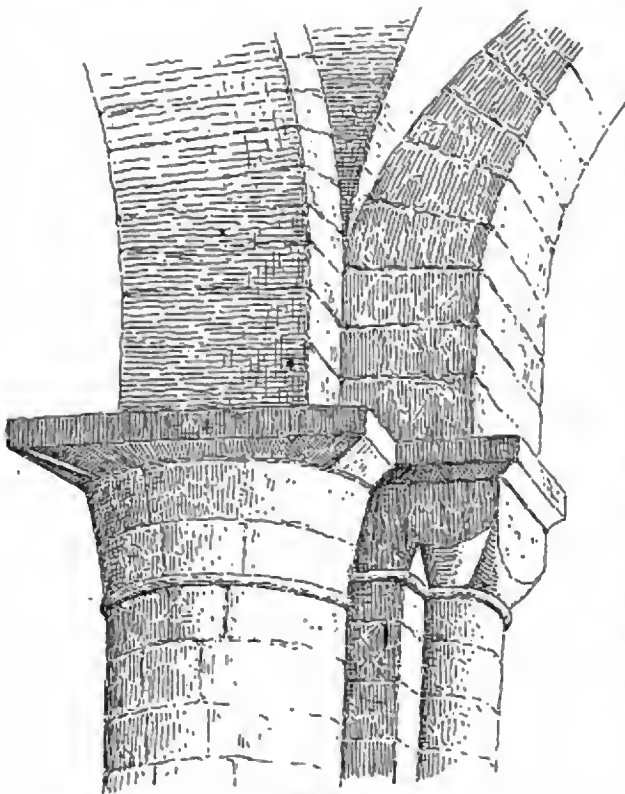


Fig. 3.

ful, of course, only on the narrow sides of a groined vault, where it serves to bring the crowns of the smaller arches up to the level of the wider ones.* Mr. Bilson remarks (p. 298) that "the haunches of the vault, for a short distance above the springing, are constructed of ashlar." I think this is an inadvertence. No ashlar reaches to the haunches, but the stiling members are of ashlar, and are surmounted by several ashlar blocks shaped to form the springing. This is seen clearly in the south-west impost of the west vault of this return aisle, and even more clearly in the south-east impost of the eastern vault of the corresponding aisle of the south arm; but it is obscure in most of the others, since the construction at the springing is more or less hidden by the plaster covering.

It will be seen that the groins of this vault are necessarily of unequal span—the groin *f* being longer than the groin *g*—not only because the compartment is, as I have said, askew on plan, and this groin is on the longer diagonal, but also because it springs at *k* out of the re-entrant angle formed by the archivolt *h* and the transverse arch *i*, as shown in the cross section (Fig. 2), and in the perspective detail (Fig. 3), while the other points of springing are the salient angles of the stiling members; and since these stiling members are of unequal magnitudes, and the one from which this groin springs is of slight projection, the groin is further lengthened. The inequality of bulk in the stiling members is great, that of the impost at *l* measuring on plan 26 by 32 centimetres, while that of the impost at *m*—from which the groin in question springs—measures only 6 by 30; and being so shallow it does not rest on the shaft below—a member whose only use is to carry it—but on the square member against the wall with which the shaft is engaged. The reason for its small dimensions would appear to be that the arch *j* being of two orders, this impost has more members than the impost at *l*—where the stiling member is large—and the additional parts, namely, those of the upper order of the arch, take up so much room that not enough is left for more bulky stiling, without advancing the whole group, with its supports, farther into the aisle. It should be said, however, that in the corresponding impost of the south arm this member is larger; and this is managed, in part, by bringing it out farther against the stiling of the first arch order, a result of which is that the extrados of this arch is not concentric with the intrados

* In Romanesque vaulting stiling is used for no other purpose. In Gothic vaulting it is employed in the longitudinal rib in order to concentrate thrust.

on the wall side. But the room thus gained is not, I think, enough to account for the larger proportions of the tilting member here, and it may be that the whole impost and its supporting members are more salient than those of the vault we are considering; but I have not taken measurements here.



Fig. 4.

On plan the groins follow the accidental sinuosities of the rude centering,* or other accidents of free-hand workmanship, while in elevation their roughly elliptical curves are equally irregular: and it

* There is no distinct development of that sinuosity which naturally results from the intersection of a wide cylindrical surface with a narrow stilted one. The vault is not oblong enough for that.

will be noticed that they die away at the crown, so that the diagram might be understood to indicate a domical vault.* This is merely a result of rude construction with imperfectly shaped centering.

The supports of this vault differ one from another in conformity with their different loads. The support at *k*, seen to the right in the headpiece, is a round column about 1.40 metres in diameter, having a pilaster strip with an engaged shaft incorporated with it on the aisle side, to carry the transverse arch *i*, as shown in the cross section (Fig. 2). The respond *l* is made up of a pilaster strip with an engaged shaft, to carry the arch *i*, and on each side of it a small shaft engaged with a square member, for the groins springing here in this vault and the one adjoining it respectively. The support *a* is one of the great piers of the eastern arcade, and has a shaft *n* for the sub-order of the arch *j* (which is at once an archivolt of the eastern arcade and a transverse arch in respect to the vault we are considering and the vault of the eastern aisle adjoining it), a smaller shaft *o* for the first order of the same arch, a still smaller shaft *p* for the groin *g*, and a large one *q* for the archivolt *h*. The other members of this pier relate to the eastern arcade and to the vaulting of the eastern aisle. It will be noticed that the north-eastern portion of this pier presents a solid square mass of masonry with two engaged shafts on its eastern side, in place of members corresponding to those of the western side. This is a result of an alteration made to reinforce the pier in order to provide additional support for a projected tower, one of four towers that were to have been added on the outer angles of the transept, as has been pointed out by Willis. The respond *m*—the one referred to above as having included in its impost the small stiling member for the groin *f*—has a member for each of the three parts of the arch *j*, and a smaller one on each side of these for the groin *f* and for the groin *d* of the adjoining vault respectively. The photographic illustration (Fig. 4) gives a full view of this vault and its supports, as seen from the central aisle of the transept. It shows the wall arch with its stiling, and how the stiling members differ in magnitude, as I have said; though the difference is not very marked in this full view, since it is mainly in the amount of projection from the wall, and can therefore be seen fully only in a view taken more or less in the direction of the long axis of the aisle. Some of the sinuosities of the groins appear clearly, and how they die away on the broad surface of the crown of the vault. The stiling of the archivolt in front is seen also.

Such is the character of this Winchester vaulting as built in the eleventh century. It is like most other Anglo-Norman vaulting of the time, as we see it at St. Albans, at Westminster, at Smithfield, and elsewhere.

We may now consider the altered vaults. These, as I have said, appear to be four in number, and are: the northernmost two of the eastern aisle of the north arm, and the southernmost two of the corresponding aisle of the south arm. That these are the primitive vaults with ribs added later is shown by the surfaces, which are not shaped to the ribs as they would be if both were contemporaneous parts of one whole, but have the same conformation as the ribless vault that we have just examined. The groins of these vaults have, of course, elliptical curves in elevation, but the curves of the ribs are arcs of circles, and thus do not fit the groins. They have therefore to be backed up with masonry to fill the intervals between the two curves. Let us examine some of these altered vaults in detail, taking first that of the compartment *B* (Fig. 1), namely, the northernmost vault of the eastern aisle, the one mentioned by Mr. Bilson as not having been rebuilt.

This compartment, in common with the others on the outer angles of the building, was diminished in area when the reinforcements in provision for the projected towers were made. The dotted lines on the pier *a*, and on the respond *b*,† of the plan give the original outlines of these parts, and the dotted line on the arch *c* marks the north side of this arch as first built. Thus the parts that lie outside of these

* In a domical vault, as need hardly be said, the salient groins naturally die away before the crown is reached, since the vault at the crown becomes a spheroid surface.

† I regret that the dotted lines on the respond *b* have been inadvertently omitted in the diagram.

dotted lines are the reinforcements in question, which block up so much of the old vault. These reinforcements not only diminished the area of the compartment, but gave rise to awkward conditions—in addition to those inherent in the form of the vault—for the introduction of the groin ribs; for in consequence of this these ribs cannot follow, on plan, the lines of the old groins, and cannot intersect in the centre of the vault. For if a, b, c, d (Fig. 5) be the rectangle of the vault, with its diagonals a, d , and b, c , and if this rectangle be cut off at the line e, f , ribs springing from the points a, d' , and b, c' , and straight on plan, will not, of course, coincide with the diagonals of the larger rectangle, nor intersect in its centre. Neither can the ribs follow the diagonals of the diminished rectangle, indicated by the dotted lines, since, by the enlargement of the supports, the springing points, c' and d' , on the south side are brought nearer together than those on the north side, and thus the four points of springing are in the angles of a trapezoid, instead of being in those of a rectangle, as in the case of an apsidal aisle vault. But the ribs of this vault do not strictly conform to this diagram, though they do so virtually. For the builder, in adjusting his ribs to the salient angles of the reinforced pier and respond, has made only the rib d (B Fig. 1) straight on plan, while he has broken the rib e to an angle. In doing so he has

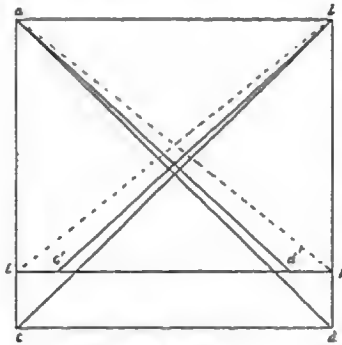


Fig. 5

not made the inner part of the rib meet the opposite part with precision, its axis falling to one side of that of the other, as shown on the plan. Had this rib been made straight on plan like the other it would have brought the point of intersection a little nearer the south side of the vault, and so diminished the area of the south cell, already smaller than the others. It may have been in order to avoid this that he broke the rib to an angle. I do not profess to read these curious results of mediæval empirical workmanship in all respects correctly, but the facts are as I state them.

In elevation the ribs are necessarily segments of less than half circles, since they could not otherwise be got under the crown of the vault. And since their points of springing, on the south side, are on plan at a considerable distance from those of the vault itself, they are also, on this side, at a considerable vertical distance from the groins, and their backings have therefore to be deeper here than on the other side, as will be seen in the elevation of the rib e folded down on the plan, and in the photograph (Fig. 6), showing the whole system as seen from the return aisle. For let a, c, b (Fig. 7) be the tilted elliptical groin arch of the vault, if we spring a segmental rib under it from the points a and b , the backings required to fill the spaces between the two curves will be equal on the two sides; but, if the arch be sprung from the points a and c , the backing over c will be deeper than that over a , as we find it here.* It is worthy of notice that the backings in this vault are, for the most part, in almost vertical planes cutting the vault surface sharply. In the other altered vaults this is generally not so, as we shall see. The ribs are profiled as in Fig. 8, and are about 30 centimetres in thickness. The voussoirs vary a good deal in width, but are generally narrow. They are well cut and closely jointed; but except at the crown, where they are fitted up to the surface of the vault, they are of varying depth, and are not cut at the extrados, as will be seen in both the diagram and the photograph. The feeble boss of leafage at the intersection, not very clearly seen in the photograph, is of course no part of the twelfth century work, and the window with mullions and tracery, seen in the east wall, is also an interpolation, as will be naturally understood. Another late pointed window has been inserted in the north wall, the acute arch of which reaches higher than the vault surface, so that this surface has had to be cut away to accommodate it.

Let us examine the photograph (Fig. 6) a little more in detail, beginning with the reinforcements of the pier and respond. These reinforcements must, it would seem, have been made almost immediately

* Just how the reinforcements bring about these conditions may be seen in the concrete in the corresponding vault of the north-west angle, which remains without ribs.

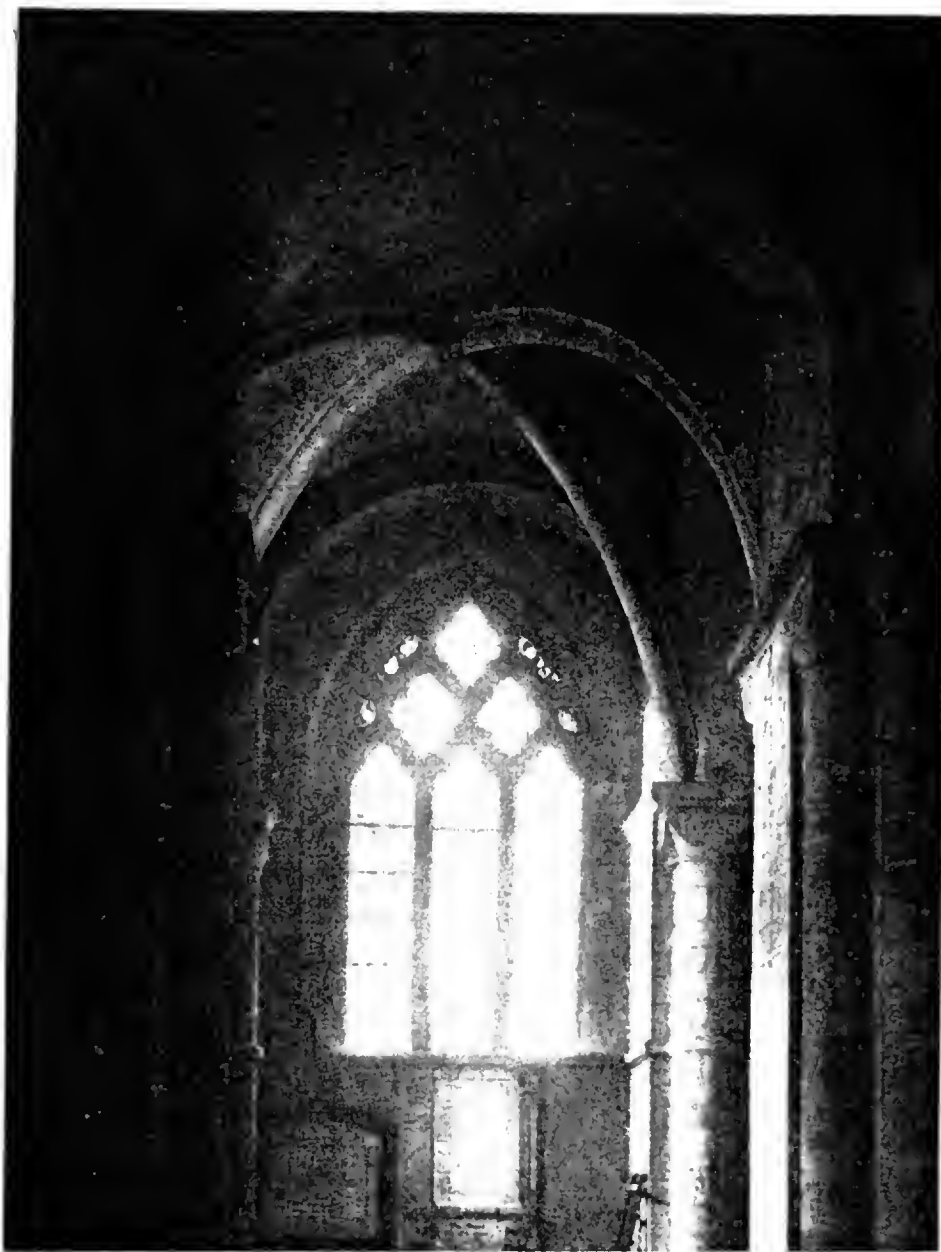


Fig. 6.

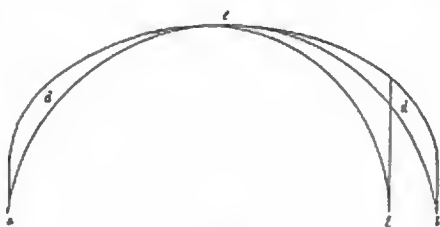


Fig. 7.

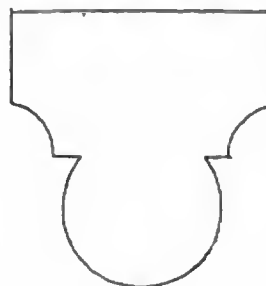


Fig. 8.

after the first completion of the piers; for the character of the masonry corresponds closely with the primitive work that remains. The two shafts to the extreme right belong to this primitive work, and relate, as will be seen, to the two orders of the great arch—the arch *j* of the plan (Fig. 1). There was, of course, formerly, and probably still is, embedded in the reinforcing mass a shaft on the farther side of the pier corresponding to the smaller of these two, to carry that side of the upper arch order, as shown in the dotted outline on the plan. The flat masonry beyond these shafts is the reinforcement, with its impost moulding continuing the abaci of the primitive capitals, and a part of the capital of the reinforcing shaft on the farther side, showing on the angle. Of the respond we see only the reinforcement, consisting of a square member with an engaged shaft, corresponding to the one whose capital we see a part of on the angle of the pier. To the right of this shaft, but in this view hidden by the pier, a part of the capital of the primitive groin shaft is visible emerging from the reinforcing parts. The flat reinforcing masonry rising from the pier, flush with the face of the stilted portion of the sub-order of the transverse arch, is carried up till it cuts the soffit of the first order; but the cutting line is hidden from view in the photograph. The reinforcing mass rising from the respond cuts the soffit of the wall arch, or rib, in like manner, but the cutting line is again hidden, from this point of view, by the groin rib that springs from the respond. It should be remarked that there is a wall arch, or rib, like the one seen in the photograph, in each bay of the eastern aisle, and each respond of this aisle has a shaft on either side to support it. We see one of these shafts in the north-east angle to the left of the window, but the corresponding one, on the north side of the respond, is now embedded in the reinforcement. In the western aisle there are no wall arches, and therefore no such shafts in the responds there.

The manner in which the ribs are inserted at the springing in the salient angles of the reinforcing masonry—the rough edges of the cavity that was opened to receive them being covered with plaster rounded up to their embedded mouldings—is clearly seen in the impost of the respond. It will be seen, too, how the point on which the ribs intersect falls to the left of the centre of the compartment, as explained above. I have said that the curves of the ribs are arcs of circles struck from centres below the springing level, so that they form angles with their supports; but in the foreshortened view of the photograph this is not so apparent as it would be in a lengthwise view. They are not, however, single arcs. Each rib is made up of two arcs, as it will be seen that they must be, since their opposite sides are unequal in length—the south sides being the shorter—while at the same time they spring from the same level as the other sides and meet them at the crown of the vault. The photograph shows also how the backings are carried up vertically, and cut the vault surface, as already stated.

(To be continued.)

TOWN PLANNING.

PRÉCIS OF MR. LANCHESTER'S MADRAS LECTURES.—IV.

(Continued from p. 260.)

The sixth lecture dealt with "City Life and Housing," and was illustrated by slides showing plans of houses and villages both in Europe and in South India.

The poet's saying "Let me make the people's ballads and I care not who makes their laws," might, said the lecturer, be paraphrased with respect to housing: "Let me provide their houses and I care not who does the rest." The standard of life in the home is bound in the long run to react on the city as a whole. What can be done to give an uplift to the general standard of housing? The first consideration must be the character of those to be accommodated and their legitimate demands in the way both of individual and communal accommodation. We must, how-

ever, go farther than this, not merely giving what they at present demand, but studying to realise and provide what they ought to demand, raising, by means of a wise provision, the standard of practical efficiency and artistic taste. Once a city has justified its economic existence, the study to be next pursued is that of fostering the best type of citizen. This study begins with the home and its adjuncts. The necessity for providing as much garden ground as is economically practicable is securing general recognition. A well aerated garden has a most potent influence on the health and mental activity of the young. A strip of ground shut in by rows of houses is inadequate, and while the cost of roads often precludes the general adoption of detached residences, a satisfactory compromise may be effected by grouping houses in blocks of three or four, so that the air may circulate freely.

The school and children's recreation ground are important factors in the education of the future citizen, and should be considered by those entrusted with the preparation of

a city plan. These factors are influenced by the views of experts in education as to how far the children may be permitted to play in small spaces provided in immediate proximity to their homes, and how far their exercises should be conjoined with school life and under the supervision of trained teachers. The educational methods of the Dottressa Montessori, in so far as they modify those of Froebel and other great educational leaders of the past, are likely to create a demand for school premises of a very different type from the existing ones.

As regards the adult, every encouragement should be offered for mental and physical recreative exercises. One of the principal defects of the modern large city is the dependence of the residents for amusement on the spectacles and entertainments provided by others, rather than on exercises developing their own faculties. Every city should aim at providing, in convenient positions, recreative centres, where the organisation of games and entertainments by the people themselves may be judiciously encouraged, so that, by this means, mental activity and resourcefulness may take the place of the sluggish apathy so often noticeable as the result of the inevitable monotony of many industrial occupations.

The lecturer went on to speak of the Indian house, which at its best, he said, was altogether admirable—only it was so seldom at its best. Social conditions were responsible for a tendency to overcrowding. A given area is occupied by those of one religion, caste or trade; owing to the contiguity of other castes or trades incompatible with the first, this area is unable to expand, and increased provision can only be made by packing houses closer on the ground. Again, the division of property among members of a family tends in the same direction: what was once a suitable house is divided and redivided, so that it ceases to be a convenient or healthy dwelling-place. The *pial* (= verandah) is enclosed, the court built over, extensions made at the back, and many rooms no longer get light and air. Housing of this type reacts on the national temperament; being accustomed to overcrowding, people feel no repugnance to such a mode of life; physique deteriorates, and, rather than undertake extra exertion, workers will pack themselves into inadequate accommodation because it is near their work or near a busy and cheerful locality. A remedy might be found by providing pleasantly-arranged building areas, easy of access, and as near as possible to the congested districts. Added to this, skilfully-organised adjustments would be required, so that the various castes or trades should not be violently uprooted, but offered some special inducement to remove, such as increased open space, or improved facilities. In laying out new extensions, future difficulties may be guarded against. The area need not be filled up solidly at once. Alternate sections or sites may be kept in hand and temporarily let as gardens or for some other suitable purpose. Then, when a reasonable claim is made out for a house site in proximity to those occupied, one of these can be allotted. By this means the desires of increasing families can be acceded to without creating congestion.

In planning extensions, while there may be no practical objection to treating these as separate and detached communities, there is a considerable risk that they will fail to attract for this reason. A site, to be popular, should be brought in as close relationship as possible to the busy life of the city, and particularly to that of the quarter from which it is hoped to draw off the surplus population; a little ingenuity and expense is not thrown away in achieving this aim.

In the seventh lecture, "Commerce and Traffic," Mr. Lanchester laid stress on the necessity for a synthetic study of all the aspects of civic life. Civic studies are essentially synthetic, and can only be sub-divided as a prelude to an ultimate re-combination. The mistake has been too often committed of making a special study the basis of a series of proposals, without regard to the conditions as a whole. With street traffic and improvement too often a partial investigation has been regarded as conclusive. The obvious and easy course of finding out where streets are overworked and providing relief by widening or some other method has been responsible for much ill-considered destruction. Even when we investigate traffic alone we should go much farther than this. The most comprehensive study of commerce and traffic has moreover to be related to the other aspects of city life.

For all questions relating to the manufacture and handling of the production and exports of the city, and similarly with regard to the produce and goods she takes in exchange, the Chambers of Commerce and Trading Associations are the proper bodies to be consulted. This will be found beneficial in two ways. First, the closer relation between those skilled in business and the Municipality will be conducive to city developments being carried out on lines leading to commercial prosperity; secondly, those perhaps too closely concentrated on purely economic activities will come to see that these must be looked at in conjunction with the convenience and amenity of the city, if it is to remain permanently great. With any large community the utmost care must be exercised to maintain the human type at its best; the tendencies to deterioration are numerous and subtle, so that if we proceed solely on the basis of immediate economic success, these tendencies will begin to operate and ultimately the advantages we have gained will be neutralised, owing to deterioration in the type of citizen. On the other hand, if we concern ourselves solely with the beauty and amenity of the city, regardless of its economic demands, we may find that, while possessing many attractions and delights, it is no longer able to earn its living.

The synthetic study of the aspects of civic life will be more clearly and definitely accomplished if it is preceded by those special studies that have been divided under the various headings described in the lectures on the Civic Survey [pp. 224-5].

The lecturer passed on to a more detailed consideration of this special branch of civic study, and recapitulated the main headings under which the study should be taken up. We may start with the import of goods: what is imported, for what purpose, how it comes, where and by what means it enters the city, how handled and sub-divided, its destination, whether food or clothing for the individual, raw material for the factory, etc., our object being to see whether all such goods are dealt with in the most economical way, or whether by remodelling or some other form of improvement we may not be able to facilitate and cheapen these operations. In like manner we must deal with every class of goods made or dealt with for export from the city, following the operations step by step on the look-out for more advantageous methods. In conjunction with this, we must consider also the location of the workers, whether convenient or inconvenient for their employment, how loss of time and energy can be minimised by improved facilities for locomotion, allocation of areas for housing, and so on. This done, we have the material on which to base a reliable conclusion as to any proposition for improvement. We can say whether

the cost would be justified economically or not. As an example of method, the lecturer took the traffic question by itself in order to give an idea of the type of analysis he would propose.

Two factors in the study of traffic conditions have not hitherto been adequately dealt with. One of them is the lack of regulations for sorting out the fast and slow traffic and directing these as far as possible into distinct lines of route. The other is the investigation as to how far the traffic in a busy street is "internal," that is to say, from one point in the street to another, and therefore incapable of diversion. Statistics on this basis are not easy to obtain, but a great deal may be done by securing a fair general impression of the manner in which such a street is used. Where it is mainly a shopping street, there can be no doubt that much of the traffic is of this kind, consequently it would be well to regard such a street as far as possible independently from the general provision of traffic routes.

Discussing how the definite economic influence on city improvements may be investigated, the lecturer said that the dominating factor which has been recognised as the main objective of recent investigations is the organisation of traffic, though, of course, there are other considerations more or less linked up with this. The first requirement is to obtain values by distance and by time for each class of vehicle affected, so that any saving in mileage or time can be definitely estimated. For this purpose vehicles can be classified on the lines accepted in the published traffic reports and a value assigned to each. The next procedure is to obtain statistical information on the traffic likely to be affected, and to estimate what proportion of it will be advantaged, and to what extent this proportion will gain in distance or time. In the gathering of these statistics it is not only necessary to estimate volume of traffic, but to dissect its purpose in detail.

In analysing the traffic in regard to an improvement, it is of the first importance to separate the local from the through traffic, on the basis of defining as local traffic that which cannot be diverted, and through traffic that which may, while the latter will again require sub-division, accordingly as it is more or less advantaged by a new route. Traffic economics, however, are not the only considerations; safety to life and limb must be regarded, together with a number of small comforts and conveniences incidental to a well-devised improvement scheme, such as advantages to health, reduced mental tension, and general amenity.

REVIEWS.

PROTECTION OF ANCIENT BUILDINGS.

The Society for the Protection of Ancient Buildings: Thirty-ninth Annual Report of the Committee, June, 1916.
[20 Buckingham Street, Adelphi, London, W.C.]

The Annual Report of the Society for the Protection of Ancient Buildings is always interesting reading, and the Report issued in last June is no exception. It is a plain statement of useful work done in spite of the crippling effect of the war on all such Societies and on the outside public. It makes one hopeful for the future, spite of these dark days for the architectural profession and all lovers of ancient buildings.

One thing is very evident in reading this Report, viz., the moderation and sweet reasonableness which

characterise the present-day policy of the Society. This is especially noticeable to those who, like the present reviewer, remember the somewhat quixotic attitude which it adopted in its earlier years, when every architect, *per se*, was the enemy, and there was only one gospel. Perhaps the touch of fanaticism, of no compromise, was necessary for those days: that the Society had to combat gross ignorance, deep-seated prejudice, and something even more powerful, we may now all frankly admit. The great Goddess Diana had her craftsmen then, who picked up a very tidy living among the silver shrines, and, not unnaturally, they foresaw the crippling of the comfortable and pious industry built up and ministered to by the Pugins, Scotts and Streets. Those were the days—and they are not yet passed from us—when the Church Shop, with its machine-made brass fittings and painted glass, at so much per foot super, reigned supreme and unchallenged.

Not all the early efforts of the Society were mere tilting at windmills. It can honestly claim to have indoctrinated the present generation of architects, as well as many of the more cultured clergy and laity, with that which is the essence of its gospel—jealous regard for our ancient buildings and their fittings, or, in other words, for those things which are part and parcel of the history of these Islands. It is a pleasure, *per contra*, to notice that, while great guiding principles are maintained, the basis of the Society has broadened within recent years, so that many independent and often hostile critics, such as the present reviewer, can conscientiously avow themselves supporters of its good work. We, who have perhaps groaned at blue bricks, little piles of tiles (which, by the way, will at no distant date be quoted by guide books as evidences of Roman work), steel joists and other bald and aggressively high-principled devices, need no longer stand aside, half sympathetic, half irritated, but join forces in a united defensive movement against the modern Philistine. We—by which let us understand all men of goodwill, professional architects and others—are not called upon to pronounce the narrow shibboleths of former days, but to use a certain very precious liberty of conscience as to minor matters of taste and opinion.

Reviewed in this light one can find nothing but good in this Annual Report, the terse descriptions of which are rendered lucid by admirable photographs. Note especially the first and last illustrations—showing the exquisite churchyard cross, with its beautiful Madonna and Child, at Tyberton, Herefordshire—an example of "restoration" in its true sense. Mr. Somers Clarke, F.S.A., a veteran architect-member, has words of wisdom for us in the preface specially pertinent to this war-time, when we are threatened by a plague of disfiguring "memorials, as per catalogue."

The repair of Hadleigh Guildhall, Suffolk, an interesting timber-framed structure, of early Tudor date; of Somerton Market Cross (p. 40), both admirably illustrated, may be instanced as wholly successful inter-

ventions of the Society. Its efforts to save the quaint old "Dolphin" at Guildford (p. 26) unfortunately failed to move a Corporation which quite recently has shown a scandalous indifference to the dangers from fire to which one of the lions of the ancient borough—Abbott's Hospital—is exposed, from mean properties on Corporation land being actually built up against its venerable walls. In Glasgow (p. 26), to take another case of municipal stupidity, the Society has fought for the cause of the well-known Tolbooth-Steeple, with, as yet, uncertain results. Truly we need not go as far as Germany in search of Huns. It is nice, too, to find that such a humble gem as the stone Pigeon-House at Tiddington, Gloucester (p. 24), can be championed to good purpose by the S.P.A.B.

PHILIP M. JOHNSTON [F.], F.S.A.

LIMES AND CEMENTS.

Limes and Cements: Their Nature, Manufacture and Use. An Elementary Treatise, by Ernest A. Duncaster, B.Sc. 8o. Lond. 1916. 5s. net. Pp. 212. [Crosby Lockwood & Son, 7 Stationers' Hall Court, E.C.]

This is a new and up-to-date edition of the old and well-known treatise on *Limes, Cements, Mortars, &c.*, by G. R. Burnell, C.E., in Weale's Series.

One cannot help feeling that the present author, or editor, could have produced a more successful modern "elementary treatise" had he been free to recast entirely the earlier volume on which this is avowedly modelled. The putting of new wine into old bottles is rarely altogether successful, and while considerable trouble and ingenuity have undoubtedly been exercised in bringing the information contained in each chapter as much up to date as possible, and illustrations of machinery, etc., have been introduced, materially assisting the explanations, the arrangement of the subject-matter is not as methodical as might be expected from a modern text-book. Our knowledge of all the materials dealt with in this volume has developed rapidly in the last quarter of a century, and yet, comparing this with a former edition published some twenty-five years ago, a great deal of matter is found to be reproduced in almost its original form. For example, under the heading of Portland Cement one naturally looks for the latest information on the subject to be collected and collated. But the early chapter with this heading being modelled on the older edition, when the material was comparatively in its infancy, has now to be supplemented by two chapters at the end of the volume in which the chemical analysis and the properties covered by the British Standard Specification are dealt with.

Written originally by a Civil Engineer, and now revised by a Bachelor of Science, the book is probably intended to appeal mainly to students of those two branches of knowledge; and while the architectural student will be able to learn much that will be useful to him, he will at the same time find many modern materials with which he has to deal unmentioned, and many of the difficulties arising in modern practice

untouched upon. For example, the important group of Plaster Cements is dismissed in a paragraph and summarised as being "liable to one objection—namely, the expense"; while cement mortar is merely described as employed "in masonry which is exposed to the action of running water . . . and more recently in many large works on dry land where great strength is required; it is also used as a surface coating to cover masonry or concrete walls and for other purposes."

However, a book that has so long survived and has passed through so many editions (the former edition referred to above being the thirteenth) must have proved of considerable service to a large number of students, and their successors in the present generation will no doubt welcome this new edition, which, from the long list of authorities quoted, has evidently been the result of much painstaking research.

HERBERT A. SACHELL [F.].

COMPETITIONS.

Australian Federal Parliament House.

As already announced in the Professional Press, a deputation consisting of Mr. H. V. Lauchess, Chairman, and Mr. Herbert A. Welch, Secretary of the R.I.B.A. Competitions Committee, waited upon the High Commissioner of the Commonwealth of Australia in London to ask, on behalf of the architects of the Allied countries, for the postponement of this competition until after the war. The deputation received a very sympathetic hearing and the Commissioner undertook to cable his Government at once and put before it the views of the Institute as expressed by the deputation. The reply of the Australian Government has now been received and is communicated to the Institute in the following letter addressed to the Secretary from the Office of the High Commissioner:—

18th September, 1916.

SIR,—With reference to the deputation which waited upon the High Commissioner from your Institute re the competition for the Federal Parliament House at Canberra, I am directed by the High Commissioner to state that having communicated by cable with the Commonwealth Government, he has now received a cablegram in reply as follows:—

"With reference to your telegram of September 5th the Government, after careful consideration of the whole matter, including objections of Victoria and British Architects to the approved resumption of competition, considers it advisable to proceed, owing to the fact that after the war the rebuilding of Europe will occupy the attention of British and Continental architects to such an extent that they will not be prepared to compete. Further postponement will only accentuate the difficulty, and meanwhile the large expenditure which has been incurred renders early occupation of the Capital very desirable. The work will also provide employment for hundreds of Australians after the war."

I am, Sir,

Your obedient Servant.

(Signed) R. MURHEAD COLLINS.



HERBERT PHILLIPS FLETCHER, D.S.O. (F.)
Major, Middlesex Hussars Yeomanry.
att'd. Royal Flying Corps.
Accidentally killed while on duty (see pp. 305, 309).



ALFRED EDWARD CORBETT, *Fellow*.
Captain, Border Regiment.
Killed in action (see p. 290).



DOUGLAS MORLEY GRIFFIN, *Associate*.
2nd Lieut., King's Liverpool Regt.
Killed in action (see p. 290).



ANDREW DANSKINE AITKEN, *Associate*.
2nd Lieut., Lowland Field Company, Royal Engineers.
Killed in action (see pp. 309, 328).



PERCY CONLIFFE PILLING, *Associate*.
Captain, Loyal North Lancashire Regt.
Died of wounds (see pp. 309, 326).



BALFOUR ADERCROMBIE, *Lieutenant*.
Private, Black Watch.
Died of wounds (see p. 326).



ARTHUR WINCH, *Associate*.
Lance-Corporal, 15th West Yorks Regt.
Killed in action (see p. 326).



CHARLES STONEHOUSE, *Associate*.
Lieut., 11th Bn. East Lancs. Regt.
Killed in action (see p. 326).



9 CONDUIT STREET, LONDON, W., 30th September 1916.

CHRONICLE.

The R.I.B.A. Record of Honour: Thirty-fourth List.

Architects fallen in the War.

ABERCROMBIE, BALFOUR [*Licentiate*], Private in the Black Watch, serving in France. Died of wounds on 31st July. Aged thirty-eight.

Balfour Abercrombie was educated at Paisley Grammar School and Rontenburn Boarding School. Intended for the profession of architecture he spent about a year at the joiner's bench and was then articled for five years to Mr. James Miller, A.R.S.A. [F.], of Glasgow, studying meanwhile at the Glasgow School of Art. On the completion of his articles he remained with Mr. Miller for two years as assistant, and started practice for himself in 1906. He was the architect of numerous villas in Paisley, Troon, Wemyss Bay, &c., of a church at Renfrew, a model farm at Kilmacolm, and considerable extensions at Brockwood Park, Hants. By arrangement with several clients he cancelled his engagements in October, 1915, and joined the Argyll and Sutherland Highlanders as a private. Two months ago when a draft to the Black Watch was proceeding to the front in France he volunteered for immediate active service and was accepted. After ten days in the trenches he took part in an attack, and on returning to billets some six miles from the front was wounded with three of his comrades by a shell which burst overhead, and he succumbed to his injuries the same evening.

STONEHOUSE, Lieut. CHARLES [A.], 11th Battalion East Lancs Regt. Killed in action in France on 1st July. Aged thirty-four.

Lieut. Stonehouse was the third surviving son of Mr. F. Stonehouse, of Blackburn. He was a pupil of Messrs. Briggs and Wolstenholme, of Blackburn and Liverpool, for five years, and was with them afterwards for a year as assistant. He was subsequently in the offices successively of Mr. N. Hartley Hacking, of Manchester; and Mr. John T. Proffitt, of Tamworth, Bolton. He was elected Associate of the Institute in 1910. On the outbreak of war he enlisted as a private in the Accrington "Pals" Battalion of the East Lancs Regt., and after promotion through the N.C.O. grades was granted a commission in the same regiment. He served both in Egypt and France.

His Commanding Officer, Lieut.-Colonel Rickman, writing to Mr. Stonehouse, senior, says: "I cannot express to you how deeply we feel his loss and how much I have appreciated his good services. He carried out his duties calmly and coolly, and in him the regiment has lost a fine soldier, a brave leader of men, conscientious in all his duties. No matter how hot the fire, he always appreciated the situation in his calm, cool way. On the day he was hit nothing could have been finer than the way he led his men to the assault. In spite of intense artillery, machine-gun and rifle fire, he had his men forward to endeavour to capture the objective allotted by the higher command."

STUBBS, Lance-Corporal EDWARD WOODHOUSE [A.], 72nd Section, 32nd Division, R.A.M.C. (T.). Killed in action on 7th August. Aged twenty-eight.

Lance-Corporal Stubbs was the only son of Mr. J. Woodhouse Stubbs, artist, of London, and served his articles with Mr. W. J. Dunham, of Norwich.

He was elected Associate of the Institute in 1910, having been placed 6th in the Intermediate Examination, 1907. He first took up domestic work, assisting Mr. W. G. Ross, Broad Street, and Mr. G. Walton, Emperor's Gate, but for the last few years was with Messrs. Searle & Searle, Paternoster Row, being chiefly occupied with factory designing, in which branch, owing to his very considerable knowledge of machinery, he was specialising. He held strong views on the improvement of workmen's cottages, and had been awarded prizes in two of the open competitions for improved cottages.

Lance-Corporal Stubbs was helping to remove wounded civilians out of houses being demolished by shell-fire during bombardment, when he was instantaneously killed. His Commanding Officer, Capt. Cattlin, writes: "He undoubtedly met his death with the greatest heroism and self-sacrifice. His action is greatly admired by us all."

The Staff-Sergeant, on behalf of the men of the 72nd Section, writes: "He was the most useful and popular member of the Section—always ready to help any one of us in any difficulty."

A permanent memorial is to be erected over his grave by the 72nd Section.

For over twenty years he suffered severely at times from asthma, which he bore with great bravery and cheerfulness—always thinking of others first. His kindly and chivalrous disposition endeared him to all his friends, and a very promising career has been cut short.

WINCH, Corporal ARTHUR [A.], 15th West Yorks Regiment. Killed in action in France on 1st July.

Corporal Winch served his articles with Mr. Walter A. Hobson, of Leeds, and studied at the Leeds School of Art, passing twice through its two years' architectural course. He was for five years assistant with Mr. Hobson after completing his articles, and started practice on his own account in 1909. He was elected an Associate of the Institute in 1911.

BOWLES, 2nd Lieut. BERNARD G., The Buffs. Killed in action on 3rd September. Aged twenty-two.

2nd Lieut. Bowles, a member of the Architectural Association, was the son of Mr. Charles W. Bowles [F.], of Sevenoaks, Kent, in whose office he was being trained. Granted a commission from the Inns of Court O.T.C. in January, 1915, he went to the Front last Easter, and in two days found himself in the front trenches. On 18th August he was slightly wounded. He was again twice in action and was killed while leading his men in an attack. His Colonel writes: "He was one of the bravest of soldiers. He had previously been wounded, but refused to go down."

DENISON, Captain R. D., Royal Warwickshire Regt. Killed in action.

Captain Denison before the war was architect to Lloyds' Bank.

FORBES, 2nd Lieut. WILLIAM ALEXANDER STANHOPE, Duke of Cornwall's Light Infantry. Killed in action on 4th September. Aged twenty-three.

2nd Lieut. Forbes was the only son of Mr. Stanhope Forbes, R.A., of Newlyn. He was educated at Bedales College, Petersfield, and in 1914 was awarded the A.A. Travelling Studentship.

LIVINGSTONE, Private GEORGE M., of Stirling, Argyll and Sutherland Highlanders. Killed in action. Aged thirty-five.

REID, 2nd Lieut. JOHN, King's Liverpool Regt.
Killed in action on 18th August.

2nd Lieut. Reid served his articles with Messrs. Morter and Dobie, architects, of Dale Street, Liverpool.

SPARROW, 2nd Lieut. FRANK E., R.E. Killed in action.

2nd Lieut. Sparrow, of Dublin, was a member of the Royal Institute of the Architects of Ireland, and had held the position of Inspector in the Architectural Department of the Irish Office of Works. He was for some time Hon. Secretary of the Architectural Association of Ireland.

WATT, 2nd Lieut. COLIN R. J., R.E. Died of wounds.
Aged twenty-four.

Wounded.

BARROWCLIFF, 2nd Lieut. A. M. [*Student*], Leicester Regt., attached R.E.

CLOUTING, 2nd Lieut. CHARLES EMERSON [*A.*], East Kent Regt.

KNIGHT, Lance-Corp. SHIRLEY [*Student*], Royal Engineers.

NEWTON, Lieut. WILLIAM GODFREY [*A.*], 23rd London Regt. (son of Mr. Ernest Newton, A.R.A., President). Badly wounded in left forearm. In hospital in London.

WORTHINGTON, Capt. J. HUBERT [*A.*], Manchester Regt.

Capt. Worthington was very seriously wounded, being shot through the body and lung, and through the thigh and the left arm and hand, and sustaining broken ribs among other incidental damage. His condition was very grave for a time and caused his friends much anxiety. He is now, however, out of danger and making a very good recovery. Capt. Worthington is a brother of Mr. Percy S. Worthington [*F.*], who has two other brothers very badly wounded.

Serving with the Forces.

The following is the Thirty-fourth List of Members, Licentiates, and Students R.I.B.A. serving with the Forces, the total to date being 67 Fellows, 491 Associates, 296 Licentiates, and 286 Students:—

FELLOWS.

Cresswell, H. O. : Staff Capt., Lands Branch, War Office.
Hall, Laurence Kirkpatrick : 2nd Lieut., R.G.A.
Spalding, R. H. : Red Cross Unit, Hospital Ship, "Glenart Castle."

ASSOCIATES.

Brooker, A. E. : R.N.A.S.
Brooks, W. E. : Royal Naval Air Service.
Cable, J. Sydney : Cadet, Artillery School.
Cosway, R. W. A. J. : Lieut., Montgomeryshire Yeomanry.
Davison, William R. : 2nd Lieut., R.F.A.
Dewhurst, R. H. : 16th Reserve Battery, R.F.A.
Hill, Claude E. : [Corpl., R.A.M.C. [T.].]
Livock, S. G. : R.A.M.C. (serving in France).
Loveitt, R. A. : R.N.A.S.
Moore, E. J. E. : London Rifle Brigade.
Morran, H. S. : Lieut., New Zealand Field Artillery.
Ritchie-Fallon, W. A. : With General Smuts's Forces.
Robinson, A. D. : O.C. Left Half "A" Coy., 2nd Labour Bn., R.E., B.E.F., France.
Ross, J. Maclaren : 2nd Lieut., R.E., Tunnelling Corps.

Sullivan, L. Sylvester : 2nd Lieut., 13th Bn. Queen's R.W. Surrey Regt.

Thompson, Morris : Lieut., 4th (Res.) King's Own Yorkshire Light Infantry.

Venning, H. J. : Lieut. and Inspector of Works, Staff for R.E. Services, Div. Officer R.E.

Wade, Charles Paget : East Anglian Royal Engineers.

Willcocks, C. B. : 2nd Lieut., R.F.C.

LICENTIATES.

Barker, T. C. : 5th Yorkshire Regt.

Brameld, Thomas : Cadet, R.H.A.

Cox, A. S. : 2nd Lieut., Royal Flying Corps.

Davies, Earl B. : Officer Commanding 2/3rd E.A. Field Company, R.E.

Ellison, F. B. : 1st Hereford Regt.

Ferry, E. Frank : Royal Engineers.

Ford, T. W. : Royal Flying Corps.

Gannon, W. : Royal Engineers.

Gask, John Harold : Royal Garrison Artillery.

Heaton, R. A. : 14th Bn., Manchester Regiment.

Ingram, H. C. : Artists' Rifles.

Lennox, Gavin : Sapper, Royal Engineers.

Lloyd, B. M. : 31st Royal Fusiliers.

Lookhart, J. W. : Royal Flying Corps.

Mark, O. H. :

Nisbet, E. C. : Cadet, R.G.A.

O'Brien, Edward : 2nd London Sanitary Company, R.A.M.C.

Shaw, Malcolm G. : F Battery, Motor Machine-Gun Section.

Spurgin, K. B. : Major, 103rd Bn., C.E. Force.

Stabler, A. W. : Sapper, 3rd Company, Durham (Fortress) Royal Engineers.

Taylor, Harold : Royal Engineers.

Thomas, H. W. : 2nd Lieut., K.F.R.E., 2/4th Company.

Tinniswood, Alfred : Artists' Rifles.

Weston, Sidney Isidore : R.N.A.S.

Whyte, J. B. : Royal Navy.

Young, Alex. : Royal Engineers.

STUDENTS.

Haywood, A. N. : Sub-Lieut., R.N.V.R.

Mitchell, C. H. : 22nd Reinforcements, N.Z. Forces.

Read, K. H. : Royal Engineers.

Winebaum, G. G. : Royal Flying Corps.

R.I.B.A. STAFF.

MacAlister, Ian, *Secretary* : Lieut., Royal Defence Corps.

Baker, F. G., *Chief Clerk* : East Surrey Regt., attached to Army Pay Corps.

Professional Classes War Relief: The Maternity Home.

The Professional Classes War Relief Council desire to make known the assistance offered by them to the wives of professional men hard hit by the war. At 13 and 14 Prince's Gate, S.W., the Council maintain a Maternity Home where expert care and nursing are offered for a nominal fee. This has been made possible by the generosity of the medical and nursing staff, who give their services voluntarily. Since the Home was opened in 1915, 180 babies have been born there, and the Council have also given considerable outside assistance to a large number of applicants whose family ties have prevented them from leaving their own homes. No other organisation offers assistance to the professional classes in this particular form, and it is desirable that it be made as widely known as possible. Applications should be made to the Secretary at the above address.

OBITUARY.

Captain Percy Cunliffe Pilling [A.].

Captain P. C. Pilling, who died of wounds on the 6th August, joined the Territorials seven years ago, and was in command of "B" Company when the Battalion was mobilised on the outbreak of war. After they went to the front he was transferred to "A" Company, and about two months ago was appointed second in command of the Battalion. Throughout his military career he was enthusiastic in his work and was esteemed both by his brother officers and in the ranks as an efficient and able officer.

Educated at Bolton Grammar School, Capt. Pilling began his training as an architect by a course of engineering in Messrs. Dobson & Barlow's works. He later studied in London, and was for some time assistant in Sir Wm. Emerson's office. Returning to Bolton about twelve years ago, he joined his father, Mr. Joseph Pilling [F.], in partnership. He passed the Qualifying Examination and was elected Associate of the Institute in 1904. Captain Pilling was held in the highest esteem by a wide circle of friends in the town, and gained some public fame as a playing member of the Bolton Garriok Club. He was thirty-seven years of age and leaves a widow, formerly Miss Walker of Kensington House, and a daughter.

Lieut.-Col. Hesketh, O.C. Loyal North Lancs Regt., writes:—"As Captain Pilling's Commanding Officer, I can truthfully say he was one of my best officers, always thinking of the best methods of improving the efficiency of the Battalion. I have been able to notice this more so during the last five weeks, when he has been acting as my second in command, his suggestions and advice being most helpful to me. It was only on the 4th of August that I had forwarded his name for a Majority. It has been a great blow to me in two senses, as I have lost a great friend and staunch supporter, thoughtful and always studying the care of his men and the general efficiency of the Battalion. I may add that the loss is mourned by us all, especially those who had served with him throughout."

Second Lieut. Andrew D. Aitken [A.].

Second Lieut. Andrew D. Aitken, whose death in action was announced in the last issue of the JOURNAL, was the son of the late Bailie John Aitken, and served his articles with Mr. John Sootland, architect, of Airdrie. He was afterwards in the offices successively of Messrs. Dykes & Robertson and Mr. James Miller, A.R.S.A. [F.], of Glasgow, during this time studying under Professor Charles Gourlay [A.], at the Royal Technical College, Glasgow. He was elected Associate of the Institute in 1906 and started practice the same year. He held for a time the appointment of teacher of architecture at Coatbridge Technical College, and later a similar position at Airdrie High School, resigning it to join the Army in January, 1915. He went out with his company to the Dardanelles and received his commission there. After the abandonment of the Dardanelles campaign he was sent to Egypt, where he met his death on the 4th August, in the fighting near the Suez Canal.

David Bird [A.].

Mr. David Bird, who died on the 29th July, had been an Associate of the Institute since 1889. He was articled in 1880 to Mr. William Dawes, of Manchester, and studied at the Manchester School of Art. He continued for some time with Mr. Dawes as assistant, and then started practice

on his own account. Among his principal works were the erection of the tower to St. Paul's Church, Sale, and making new entrance and other alterations to the church; the building of a large mission hall for the same parish, and enlargement of the schools; also enlargement of the Brooklands High School for Boys. Failing health of late years had obliged him to give up practice.

CORRESPONDENCE.

Cards for Architects serving with the Forces.

9 Conduit Street, W., 26th September 1916.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—I should like all architects who read the JOURNAL to know that the efforts of my Committee have resulted in the recognition by the War Office of a card bearing the Chairman's signature, setting out the professional credentials of men on our files who are now serving, which can be kept in Army Book No. 64, and thus carried about to be produced if any special services are required. The War Office has supplied all Commanders-in-Chief at home and abroad with one of these blank cards, accompanied by a covering letter, and I have so many expressions of appreciation of this scheme from men serving, that I feel it should be as widely known as possible.

The cards are only sent to men who have filled in a War Service Form issued by my Committee through the JOURNAL and the professional Press last November, but these forms can still be obtained from the R.I.B.A., and I shall be most pleased to bring before the Committee any filled in by colleagues who are serving, with a view to the issue of the card in question to the applicants.

ALAN E. MUNBY,
Hon. Sec. Selection War Committee.

NOTICES.

Australian Parliament House Competition.

The attention of members is directed to the Australian Government's cablegram on page 323.

Licentiate and the Fellowship.

The next Examination of Licentiates desiring to qualify for Candidature as Fellows will take place in January, 1917. Applications for admission to the Examination must be sent in by the end of the current year. Full particulars may be had on application to the Secretary, R.I.B.A.

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Fig. 9.

THE AISLE VAULTING OF WINCHESTER TRANSEPT.

By Professor CHARLES H. MOORE, A.M. [*Hon. A.*], late Director of the Fogg Art Museum, Harvard University.

(Continued from page 320)

IN the vault of the south-east corner of the south arm (Fig. 10) more curious features occur. In this vault not only was an addition made to the transverse arch *d*, as in the corresponding arch of the vault last examined, but the wall arch was likewise reinforced. Thus when the groin ribs were introduced their points of springing could be brought more nearly in the angles of a rectangle, save the point *c*, to which the rib *a* was extended so as to reach the reinforcing shaft of the respond that stands far out of the rectangle. It will be well to compare more closely for a moment the manner in which the ribs of the vault *B* (Fig. 1) and those of this vault are adjusted on plan. In the vault *B* the ribs spring on the south side from the salient angles of the pier *a* and the respond *b* respectively, while on the north side they spring from the re-entrant angles of the compartment, and are thus farther apart on this side than they are on the other; which brings the four points of springing into the angles of a trapezoid, instead of a rectangle, as I have before said. But in the vault we are now considering (Fig. 10) all the springings would be nearly in the angles of a rectangle if the rib *a* were not prolonged to the point *c*. The narrowing of the transverse arch *d*, in a curved line, toward the respond, and, to a less extent, the narrowing and curvature of the wall arch *e*, so notice-

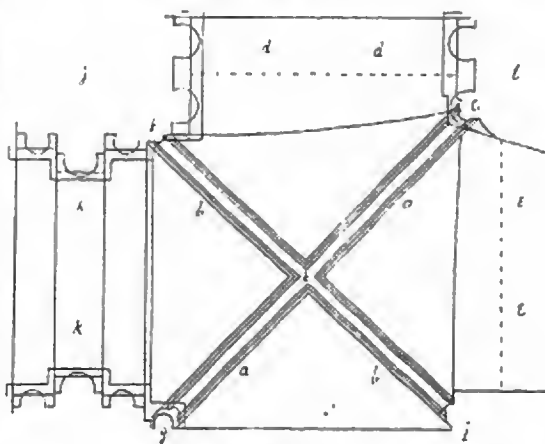


Fig. 10.

able on the plan, are due to the fact that instead of breaking an opening in the angle of the reinforced impost to receive the rib, as was done in the corresponding part of the other vault, these arches were cut away in this fashion over almost their entire lengths in order to get the ribs in.*

Both ribs in this vault are straight on plan, and the point of intersection is nearly in the middle of the compartment as diminished in area by the reinforcements, thus not in the middle of the vault, from which it is considerably removed both toward the south and toward the west. In elevation they appear to be single arcs, but their springing levels differ, and the adjustments at the springings present some strange features that are worthy of notice. The rib *a*, at the point *c*, springs, as I have said, from the capital of the reinforcing shaft of the respond *l*; but at the other end, the point *g*, it springs from a square block set upon the capital of the groin shaft, and nearly flush with the sides of its abacus, as shown at *a* in Fig. 11†; while the rib *b* springs, at each end, from a corbel set diagonally, with its upper surface about 60 centimetres above the true impost level. Fig. 12 shows the corbel of the impost *f*, and its relation to the capital of the reinforcing shaft attached to the pier. The use of the square block at the springing *g* of the rib *a* grew clearly out of the unequal lengths of the two sides of this rib, caused by the fact that the side *hc* springs from the capital of the respond shaft standing outside the rectangle of the compartment, as just observed. Since it thus starts from the true impost level, it was impossible that the shorter side *hg* (a portion of the same arc, with its crown at the crown of the vault) should spring at the same level; for if (Fig. 13) we describe an arc *acb*, and then shorten *ac* by cutting it off at *d*, the point *d* will, of course, be above the level of the line *ab*. Thus it was in order to reach this point that the square block was inserted at *g* of the plan. But with the rib *b* the conditions are different. Since its springing at *f* is from the re-entrant angle formed by the pier *j* and the great archivolt *k*, and its springing at *i* is from that of the window jamb and the south wall, it is shorter than the other rib; and, since its opposite sides are practically equal in length, they both spring from about the same level, that is, from the corbels above described, which are, as I have said, about 60 centimetres above the normal impost level. That these springing points are so much higher than the springing of the rib *a* at *g*, where the square block occurs, is, of course, due to the fact that more of the arc is cut off; for if (Fig. 13) we lay off on the line *ab*, the length *gh* on plan of the shorter rib, with its ends equally distant from *a* and from *b*, and from these ends, *g* and *h* respectively, set up vertical lines, they will cut the arc in the points *e* and *f*, which are higher than the point *d*.

Before leaving this south-east vault it should be remarked that the backings on the ribs widen as they rise, so that their sides incline, instead of being vertical; but they have plane surfaces, which cut the vault in sharp lines as before.

Coming back to the north arm, we find that the middle vault of the eastern aisle—which adjoins the vault *B* (Fig. 1)—has had its ribs inserted at a later time than any of the others. They appear to date from about the middle of the thirteenth century, since their profiling (Fig. 14) is like that of the choir of Westminster. That a Norman ribless vault should have had ribs built under it at this advanced period is remarkable. This compartment retains its original proportions, and the ribs spring from the primitive groin shafts, follow on plan the groins of the vault, and thus intersect in its centre. Having the full span of the groins of the vault, their curves had to be struck from a point farther below the springing line, and they, therefore, form more acute angles with the supports. Each rib is in the form of a single arc, and, since the springings are from the original groin shafts, the backings are

* It will be noticed on the plan that the jamb of the arch *e* is played on the north side and square on the south. A reason for this irregularity does not appear, but it is of no importance, and was presumably brought about in connection with the later introduction of the large late pointed window that now fills the space beneath the arch.

† Fig. 11 is taken from the adjoining vault of the east aisle. I had made this drawing before I had studied the vault we are

considering, but it serves for illustration, since the block and its relation to the rib and the supporting shaft are exactly the same in both of these vaults. But in the illustration we see the block in connection with other members of the pier and archivolt, while in the vault we are considering these other members are hidden by the wall that now encloses the compartment on the west side.

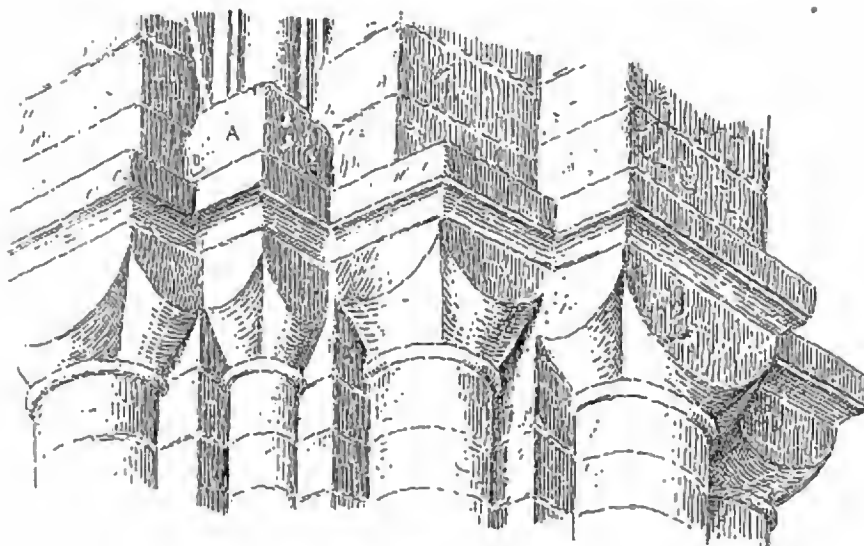


Fig. 11.

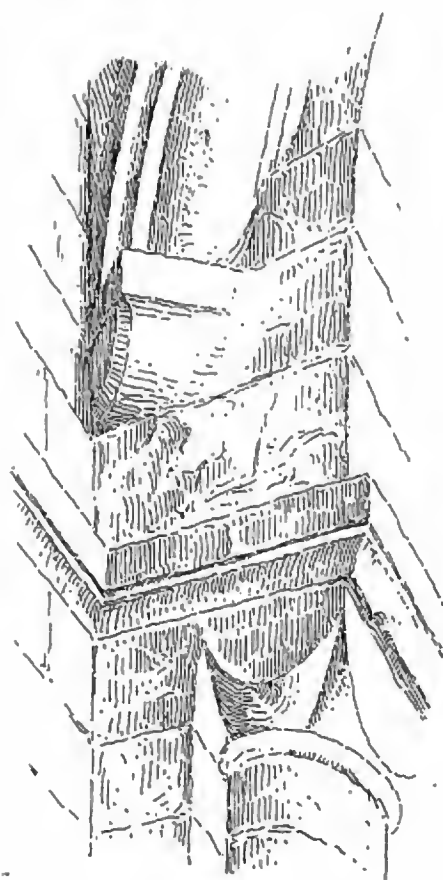


Fig. 12.

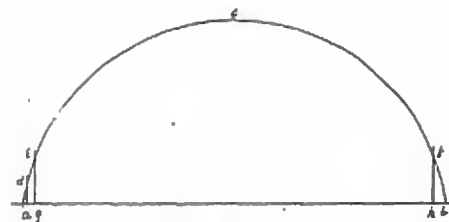


Fig. 13.

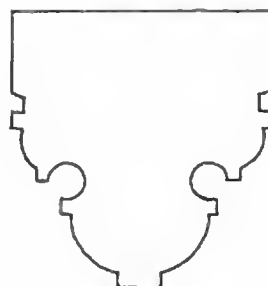


Fig. 14.

naturally equal on the opposite sides. But in some places the backings of this vault are more or less arched out, so as to pass into the surface of the vault instead of cutting it.

I have described these altered vaults in the order in which I have studied them, but looking back over the series, and comparing them, I am inclined to believe that the order in which they were changed was different. The makeshifts of the south-eastern vault of the south arm show a degree of awkwardness in adjusting the ribs that would seem to point to this vault as the first to which ribs were introduced; the adjoining vault—the middle one of this eastern aisle—since it has fewer awkward features—appears to me to have followed next; the north-east vault of the north arm was, I think, the third; and the middle vault of the north-eastern aisle was clearly the last. It is worthy of remark that a motive on structural grounds for the introduction of these ribs does not appear. The fact that the unaltered vaults remain intact shows that no reinforcements were required.

As for the vaults that appear to have been entirely rebuilt, one of which—the middle one of the western aisle of the south arm—is shown in Fig. 9 [p. 329],* their ribs are formed like the others. That is to say, their curves are again struck from below the springing level, so that the crowns of the vault cells are kept in straight lines, like those of the primitive ones; but there are none of those awkward adjustments at the points of springing that we have noticed in the altered vaults, and, save for the straight crowns, the conformations of the cells are wholly new, since they are shaped to the ribs, and are, therefore, nowhere cylindrical. But on account of the retention of the segmental form of rib—that had to be employed in the old vaults—these new vaults have not the character that is proper to vaulting on entirely independent rib systems—in which the groin ribs are made semicircular. The compartment shown in the illustration has been walled in, in modern times, on the north and east sides, but it appears otherwise intact. In the vault, as will be seen, the plaster is off in some places, enough to show that it is built of roughly cut stones, varying considerably in size, and that in warping the surfaces to the ribs some of the courses had to be made more or less gore-shaped. The warping, or ploughshare conformation, of these surfaces is naturally very marked from the springing up to the haunch. The wide transverse arch, the springing of which is seen to the right, is one of those that were reinforced in provision for the projected towers; the adjoining compartment, from which we get this view, being that of the south-west angle. The reinforced part of the arch is, of course, the hither side of it, and enough of the masonry can be seen through the plaster on the soffit to show that this reinforcement constitutes more than half of the arch as it now exists. It will be understood that the shaft to the extreme right, and the masonry with which it is engaged, are parts of the reinforcement; and it is worthy of notice that a part of the capital of the primitive groin shaft appears in the opening between the two larger capitals, as I have said that one does in the respond of the vault *B* (Fig. 1) noticed above. All the other members of this pier, visible from this point, belong to the primitive construction.

Taken altogether, these Winchester vaults are important in their bearing on the question of Norman initiative and inventive progress in mediæval vault development, on which opinions have differed. We see in them, it appears to me, two influences at work, that of the old Roman tradition, and that of the new organic style of building that was taking form on the Continent. But these influences are mutually incompatible. The Roman groined vault does not lend itself to development on the lines of the ribbed vaulting of organic mediæval architecture. Such development requires that the form of the vault be not a resultant of any interpenetrating surfaces, but a *consequence of the forms and adjustments of an independent skeleton of ribs*. In place of the semi-elliptical groins of the vault formed by the interpenetration of half cylinders, the mediæval ribbed vault, of the progressive builders of the Continent, has of necessity semicircular groins, since they are formed on semicircular diagonal

*I regret that, on account of the contracted space of the adjoining south compartment, from which the photograph had to be taken, the perspective distortions of the illustration

could not be avoided. But, with due allowance for these, the character of the vault may be perfectly understood from it.

ribs which were first set up ; and to these ribs, together with the arches, or ribs, on the sides of the compartment, the constructor fitted the vault, warping its surfaces in any way that the proportions and adjustments of the several ribs in the skeleton required. It is this that differentiates progressive mediæval vault construction in north-western Europe from all other.

There could, of course, be no development of an independent rib system in connection with the old vaults of this transept, but in those that were rebuilt we should expect, if the builders were awake to the true principles of ribbed vaulting, to find changes in the forms and adjustments of the ribs. But, as I have said, no changes were made. The ribs of the rebuilt vaults virtually reproduce those of the altered ones. Thus, while the shaping of the vaults to these ribs changes their conformation materially, yet they do not become ribbed vaults in any full and proper sense. In true ribbed vaulting the rib system is primary, and in all organic building of the Middle Ages, as in natural organisms, primary things determine all others.

The supports, as we have seen, are all of the primitive work, and include small shafts under the groins, but in plain groined vaulting no such shafts are required. The square pilaster strip—as in the crypt of the dormitory at Westminster and in the aisles of the chapel of the Tower—is all that is needed, and where the groin is not salient at the springing even this is unnecessary, as we see in the perspective elevation (Fig. 3) of the impost at *k* (Fig. 1) where the groin springs out of the re-entrant angle. The introduction of this shaft was not, therefore, a natural provision for a structural need, as the groin rib shaft in a truly organic system is. Such a member has no propriety in connection with a ribless vault, and in introducing it the Norman builder appears to have been working imitatively. In the altered vaults the interpolated ribs give, it is true, a use for these shafts ; but, since the ribs themselves have, as we have seen, no justification on structural grounds, the imitative character of both can hardly be questioned.

The accidents of free-hand execution are marked in every part of the work. Hardly a line, on plan or in elevation, would be found to coincide with a straightedge. The arches and archivolts are on plan more or less curved or sinuous, and are often narrower at the crown than at the springing, while in elevation they are variously irregular, some being semicircular, some less than half circles, some stilted, and some of horseshoe form. These variations arise in part from differences of span in relation to height, but why one arch should be stilted and another horseshoe-shaped it is hard to determine.

The bases are profiled as in Fig. 15, and some of them are astonishingly irregular in form. In one base of the north return aisle the fillet that divides the scotia from the lower torus does not lie in anything approaching a horizontal plane, but in a surface that undulates like a wave of the sea. The capitals likewise show all manner of irregularities, and their flat sides are in most cases more or less hollowed and winding.

As for the structural system of this transept as a whole, it is curiously illogical. The tall shafts that reach to the wall cornice could not carry vaulting, since vaulting cannot spring from the top of a wall. The short shafts, too, over the ends of the return aisles have no intelligible purpose that has yet been discovered. Willis suggests the possibility of an intention to erect an arcade over the return aisle, and to utilise the gallery thus enclosed for chapels or for the preservation of relics. The ends of such an arcade, he appears to think, might have been supported on these shafts ; and he questions whether certain signs of disturbance which he finds in the masonry over the shafts may not be traces of something once actually built there. But arches springing from these shafts would not range in height with those of the triforium, and such an arcade could not, therefore, I think, have been contemplated. Mediæval architecture, however,



Fig. 15.

on the Continent as well as in England, often presents many equally puzzling features. The clerestory in its relation to the substructure is no less incongruous. It has the usual Norman passageway, but the composition is not the same throughout. In the bay adjoining the great reinforced pier of the crossing

it has, as will be seen in the headpiece, a great opening, the unsplayed jambs of which are solid above the passageway, with a small shafted arch on either side in the inner plane below it. This gives, on the inside, a group of three arches which would, if there were vaulting, fall within a wall arch; but without such an arch there is no reason for such a group. Under the timber roof arches of equal height would be more natural and appropriate. Beyond this—since the shafts over the ends of the return aisle are not carried up like the others—the clerestory is not divided into bays. Nevertheless two groups of arches, substantially like the first, are given here, with the two small arches, where the groups join, brought together and supported on three small shafts. Willis supposes that the clerestory and the substructure were built at different times, but this does not explain their lack of structural consistency. The ground story and triforium arcades are strictly logical in composition, and it is strange that the same logic should not extend through the whole system.

But, notwithstanding its structural aberrations, the total effect of this transept is one of impressive grandeur. It has a massive dignity and restraint that are, I think, seldom equalled. The plain squared-edged archivelts, the cubic simplicity of the capitals, and the prevailing severity of expression give something of a Doric quality, notwithstanding the essential difference between it and any Doric art.

RICHARD PHENÉ SPIERS.

IT must have been about 1880 that I met the late Phéné Spiers. He was the master at the Royal Academy School of Architecture, and I there came under his instruction for the first time. The scheme of education had then, I think, been recently reorganised. The method was to work out certain "subjects" under the advice of R.A. Visitors. As an example, I may recall that I did a Bishop's Tomb under Street, the Hall of a Country House under Norman Shaw, and a City Clock Tower under Waterhouse. It was good fun, but it was anarchy. The constant master was, of course, overruled by the various opinions of the succession of Visitors, and thus the influence of the one man who could have taught us something of system and linked us to the larger European tradition of the time was rendered unavailing. Before this time Spiers, on winning the Soane Medallion and Travelling Studentship, had travelled in Egypt, Syria, and Greece, working for part of the time with students from Paris. Either on his return, or before, he studied in the Atelier Blouet-Gilbert, where he made many friends with whom he long maintained relations. Spiers was in much a follower of Cockerell, and he was not able to accept the narrowly concentrated point of view of the Gothic revivalists. His early studies at Athens, Damascus, and Luxor prevented that, as also did his training in the French tradition. He indeed was the one link between the older days of architectural thought and our present time. It was a difficult and lonely position; he knew that he knew, but he had nothing of bitterness, and he openly admired the diverse gifts of Street, Shaw, and the others. He was a true cosmopolitan; the position, one might have thought, would have forced him into opposition to the "medievalism" of his time, but it did not. He saw

and loved the Gothic equally with the Greek as part of the great process of architecture, and I don't think he felt any more need to love one and hate the other than he did to love mutton and hate beef, or *vice versa*. He was thankful for both. His attainments as a draughtsman were already of a high order when he went on his scholarship tour, and he brought back a fine collection of studies. I remember especially drawings of Egyptian capitals, of the interior of the Great Mosque at Damascus, and of the Parthenon. Later he became a fully qualified water-colour painter of architectural subjects, and regularly exhibited. He was one of the first to be interested in Japanese art, of which he was quite a connoisseur. His building practice was never, I believe, large, but he did some able work.

From about 1890 to 1900 I frequently saw Spiers, who from this time was an older friend. I was welcomed at his house, and had many long and to me delightful conversations on our common friend Architecture. At this time I suppose he was the only man in England who took the whole world for his province, and he was always ready to discuss Greek origins, or Persian art, or the problems of vaulting. For his even friendliness at that time I owe him very much, it was one of the things which made living in London just possible for a lonely person.

His historical knowledge of architectural monuments was not only very wide, but also, I think, remarkably sound and sure; he had the instinct for dating and placing. Then he had travelled widely, and knew foreign and American architects better than any other English architect, and was, indeed, in this respect a "national asset," for they liked, and could understand, Spiers. Yet he was wonderfully modest—it is true—and talked with us with less than no sign of the superior, overbearing manner. That

indeed was his weak spot (!), he did not care for riding over people. As to his helpfulness in advising generations of students where to go and where to find what they wanted, his patience is hardly to be believed.

To the Institute of Architects he was for a great many years a loyal supporter. Here, again, he was a giver rather than a receiver. Spiers' special gifts for research in the history of architecture would not only have been more appreciated in other countries, but in them he would have been likely to get some appointment related to such researches. As it is, I cannot but think that his gifts were largely wasted. Even his volume of collected Essays was published by a small group of friendly admirers as part of a testimonial to him in 1905. Two days ago I met Mr. Bilson, and on speaking of our loss in the death of Spiers he told me a story with which I will end. A great French archaeologist was visiting him a few years since, and noticing the volume *Architecture East and West* on his shelves, remarked, "That is a good book. I wish we had architects in France who made studies like that."

Oct. 12, 1916.

W. R. LETHABY [F.]

Richard Phéné Spiers was born in 1838, the eldest son of Alderman Richard James Spiers, J.P., F.S.A., a leading citizen of Oxford and Mayor of that city in 1854. He was educated at King's College School, and afterwards in the Engineering Department of King's College, London, of which he became Hon. Fellow. For three years from 1858 he was a student of architecture in the Atelier Questel of the École des Beaux-Arts, Paris. Returning to London, he entered the office of Sir M. Digby Wyatt, where he assisted in the preparation of designs for the interior construction and decoration of the India Office, in St. James's Park and Whitehall. He became an Associate of the Institute in 1861, and was one of the nineteen candidates who sat for the first Voluntary Examination held by the Institute in 1863 and one of the eight who passed in the Class of Proficiency. In the following year he sat again, and was the first of the only three architects who passed in the Class of Distinction. As a student at the Royal Academy Schools he gained in 1863 both the Silver Medal and the Gold Medal, and in 1864 he was awarded the Travelling Studentship. In 1865 he won at the Institute the Soane Medallion and £50 with a set of seven drawings and a description of "An Institute for the Study, Practice, and Performance of Music." The money went towards the expenses of an eighteen months' tour in Germany, France, Greece, Constantinople, Palestine, Syria, and Egypt, in which he was accompanied by M. le Brun. Many of the studies made during the tour have been exhibited and published. Returning to London in 1866, he assisted in the delineation of the design submitted by William Burges, A.R.A., for the new Law Courts. It is interesting to mention that Mr. Spiers' drawing of a portion of the Strand front was eventually presented by H.M. Office of Works to the Architectural Association. He competed with Mr. C. J. Phipps for the Church of the Sacré Cœur, Montmartre, in the accepted Modern French method, then quite out of key with English ideas. His executed works include additions to Umberslade, Warwickshire, for Mr. F. G. Muntz, M.P.; the restoration of the churches of Hampton Poyle and Weston-on-the-Green, Oxfordshire; Lord Monkswell's house on the Chelsea Embankment;

studios for Mr. Thomas Faeo, R.A., Mr. R. W. Beavis, and Mrs. Jopling; two studios at Campden Hill Square for Mr. Andrew Tuer; two houses in Bedford Gardens, Notting Hill Gate; two London Board Schools, and additions and alterations to the Beckett Hospital, Barnsley. He planned and laid out the grounds of Loeko Park, Barnsley, for Mrs. Locke; and in collaboration with M. Trouquois, of Paris, designed and carried out Impney Court, near Droitwich, for the late Mr. John Corbett.

When the Royal Academy migrated to Burlington House in 1870 Mr. Spiers was appointed Master of the Architectural School. He held the appointment for thirty-six years, retiring at the end of the July Session, 1906. In 1905 the general appreciation of his services was the cause of a remarkable demonstration. Mr. Spiers was entertained at dinner by a large and influential gathering of his friends, former pupils, and fellow-artists (under the presidency of Sir Aston Webb), who presented to him an illuminated address bearing the signatures of over 300 British architects, twenty-four from the Colonies, fifteen from the United States, three from France (besides an address sent by the Société Centrale des Architectes Français, and one from the old students of the Atelier Blouet-Gilbert-Questel-Pascal, Paris), four from Japan, five from Holland, and many others. The gifts presented to him that evening embraced some books from his former Academy pupils, a medallion with portrait, modelled by Professor Lanteri, a smaller medallion portrait from the Architectural Association, a commemorative medal struck in his honour by the Société Centrale des Architectes Français, four volumes of *L'Architecture Française de Blondel*, by the Atelier above mentioned, and a copy of Mr. Spiers' *Architecture East and West*, consisting of a series of essays collected and published by the Testimonial Committee. Mr. Spiers generously devoted the money balance of the fund to the forming of a national collection of drawings of ancient architecture to be deposited in the Victoria and Albert Museum. In this undertaking he was joined by Mr. R. Weir Schultz (now Mr. R. S. Weir) and Professor W. R. Lethaby, and as a result several thousand valuable measured drawings of important buildings or designs and working drawings by distinguished architects are now available to students at South Kensington.

Mr. Spiers was elected a Fellow of the Institute in 1877. He served on the Council for fifteen years—1888-1903: was a member of the Literature Committee for twenty-two years, and Chairman for eleven years. He was a constant contributor to the JOURNAL, was until latterly a regular attendant and frequent speaker at the evening meetings, and read the following Papers:—"Notes respecting some of the Condemned City Churches" (TRANSACTIONS 1876-77); "On the Students' Text-book proposed to be published by the Institute" (ib. 1870-71); "The Chateau of Pierrefonds and its Restoration by M. Viollet-le-Duc" (ib. 1873-74); "The French Diplôme d'Architecte and the German System of Architectural Education" (ib. 1883-84); "The Foreign System of Shading and Tinting Drawings" (ib. 1884-85); "Notes on the Arab House of Egypt" (ib. 1889-90); "Sassanian Architecture" (ib. 1890-91); "Saint-Front of Périgueux and the Domed Churches of Périgord and the Charente" (JOURNAL, 1895-96); "The Great Mosque of the Omeiyades" (JOURNAL, 1896-97, 1897-98). Some of these Papers were included in the volume *Architecture East and West*, published as part of the testimonial above referred to. Others of his published works are his editions of Pugin's *Normandy, Architectural Drawing*, and *The Orders of Architecture*. He did the very

important work of keeping up to date Fergusson's *History of Architecture*, and wrote the whole of the Roman part and some of the Greek chapters of Anderson and Spiers' *Architecture of Greece and Rome*. He contributed the articles upon Persian and Roman Architecture to Dr. Russell Sturgis's *Dictionary of Architecture*, and those upon Architecture and Architectural Archaeology to the *Encyclopædia Britannica*.

He was a member and Past-President of the Architectural Association; Membre Correspondant de l'Institut de France; Hon. and Corresponding Member of the Société Centrale des Architectes Français, Paris, and of the Sociedad de los Arquitectos, Madrid; Hon. Associate of the American Institute of Architects, and Associate and Hon. Fellow of King's College, London.

The funeral took place at Brookwood Cemetery on the 5th October, the Council of the Institute being represented by Sir John Burnet, R.S.A., Vice-President. An excellent full-page portrait sketch of Mr. Spiers appeared in *The Builder* for the 13th October, and the *Architects' and Builders' Journal* of the 18th has an illustration of Professor Lanteri's medallion portrait above mentioned.

TOWN PLANNING.

PRÉCIS OF MR. LANCHESTER'S MADRAS LECTURES.—V.

(Continued from p. 322.)

The eighth lecture was devoted to a comparison of "Indian and European Cities," the matter relating to Indian cities being drawn largely from Indian literature on town and village planning as practised in ancient times.

While many Indian cities vie in antiquity with ours, the existing city in Europe is on the average more stable than the Indian city. In Europe there are but few deserted cities such as are not infrequent in India. Despite wars and catastrophes, almost all the places that show prominently in European history of the last 2,000 years are going concerns to-day. Whilst in India some of the glorious cities of the past exist but in name, others are inhabited only by the goats and the bats. The lecturer suggested that the reason might be that the European city was located by economic needs, the Indian by imaginative caprice. The Indian potentate seemed to have built his city as an artist would paint a picture. In roving over his possessions, some site or other seized on his imagination as the basis of a scheme of beauty such as the European never dreamed of. He set to work strenuously to realise his vision, and, perhaps at the cost of a continuing economic strain, his race maintained and developed his undertaking. Once the guiding effort was removed there was no security for its permanence. European cities have been destroyed, but they have persisted. Indian cities once gone rarely seem to revive, and the Indian regarded their lapse with more equanimity than would be felt in Europe. The European city, being more firmly rooted, is naturally more uniformly substantial. There is a constant polishing up and various forms of adaptation always going on, with a view to maintaining the city, as a working machine, at a high level. This lack of continued effort in the Indian town looked too much as if its inhabitants had doubts of its continuance, as if this or that little thing was hardly worth while, in view of the fact that the city might take wings, like so many of its predecessors, leaving behind, perhaps, only the fine temple to testify to its former greatness.

The ancient Hindu cities were planned with great care. It would probably be a revelation to modern architects to know how scientifically the problems of town planning were treated in the ancient Indian architectural treatises. The experience of many generations had proved that the old plans and rules of construction, as given in the *Silpa-sastras*, were the best for purposes of defence, and gave the most healthy, pleasant, and practical lay-out for an Indian village or town. The easterly axis of the plan ensured that the principal streets were purified by the rays of the sun sweeping through them from morning till evening; while the intersection of main streets by shorter ones running north and south provided a perfect circulation of air and the utmost benefit of the cool breezes.

Just as the village cottage, or village hut, formed the unit of house-planning, so the village plan was the unit used to form the mahalla, or ward, in town-planning. The *Manasara* recognises forty different classes of villages and towns, according to the extent of the lands owned by them, commencing with a village unit which was 4,000 feet square, so that the extent of the largest cities would be about 30 English miles square. Of this area, about one-third was devoted to building space and the rest to the agricultural lands owned by the community. Neither a village nor a town was usually square in plan, but a rectangle, with the long sides running east and west so as to secure a proper circulation of air, even in the largest cities. One of the long sides generally faced a lake or river, an arrangement which provided bathing facilities for all the inhabitants, and obviated the necessity of building defensive works all round.

Having examined in detail some of the village plans, of which eight standard types were given in the *Manasara*, Mr. Lanchester said that the European, whose guiding rules were much less detailed than these, was thrown much more on his own resources, and for this reason perhaps his cities, defective though they might be in some respects, are based more closely on obviously logical needs—such as those of defence and, subsequently, of commerce and industrial facilities. He by no means suggested that the useful suggestions of their own teachers should be disregarded in India, but there was the necessity of appreciating the points in which they are applicable to present conditions and of interpreting them broadly in the light of modern practice, so that developments in the future were not hampered by misunderstanding of the true intention of the *Sastras* and of the merits that it was their aim to secure.

In the ninth lecture, "Problems in India" were discussed, the special factors dictating the character of the Indian city at the present time being briefly studied. The lecturer hoped that while accepting the advantages of the new conditions of things the merits of the old might be retained. He claimed to be an evolutionist, not a revolutionist, and he hoped to convince them, if they needed convincing, that this was the sane and rational method of solution for the problems that faced us in the near future. The after-effects of unrestricted industrialism were still sufficiently conspicuous to make us extremely dubious as to its advantages, and extremely desirous of seeing every possible precaution taken when we find mechanical methods of production taking the place of the individual craftsman. The more anyone is able to take an interest in the craft by which he earns his bread, the more efficiently and vitally will he exercise that craft and the more will his faculties be expanded. Those countries that are most under the domination of industrial organisation on a large scale, pay a heavy toll in deteriorated masses of people,

ever on the verge of being unfit for their own or any other employment. Does, he asked, a superior standard of luxury compensate for this state of affairs?

So far, the Indian city has to a large extent escaped this tendency, and its system of hereditary trades increases its powers of resistance. He asked them not to encourage the break-up of the Indian social system; it had been of value in the past and might be of no less value in the future. The traditional divisions of the people and their prescriptive occupations were of service in helping to resist the temptations that wholesale exploitation held out, and might keep this at bay until the conditions of organised output became far better than they were at present. The Indian was less qualified to resist adverse influences than the European, who had had to fight for his position till it had become a habit, and the class termed "unemployable" would much more quickly arise; therefore, he should keep to a system that acts as a check on such an undesirable development.

Speaking of sanitation, the lecturer said that India had in the past a definite sanitary system, perhaps ideally perfect for small communities and provided it was rigidly adhered to. Neither of these conditions, however, had been maintained. Even the large city of old days was more or less a series of groups, with gardens and open spaces in between, quite unlike the closely packed towns of later centuries. Again, the discipline of strict observances had become relaxed, with the result that it was impossible to restore the old conditions in the larger cities of to-day. There seemed to be two alternatives where the city was definitely and irrevocably compacted together. The lecturer said he saw no other course than the adoption of European methods, with such adaptations as could be made to meet national habits, and when everything practicable had been done in this direction to train the people to fall in line with the demands the system makes. At the same time, everything possible should be done to avoid building developments that necessitated the extension of sewerage systems, so that for as long as practicable there might be the alternative of the more traditional practices. The open lay-out of the garden suburb was of use in this respect, and it would help if the old idea of the city as a group of villages could be revived. They could not afford to introduce everywhere the costly systems demanded in Europe, neither would they benefit them unless the inhabitants were prepared to accept the change.

REVIEWS.

THE GREEK HOUSE.

The Greek House: Its History and Development from the Neolithic Period to the Hellenistic Age. By Bertha Carr Rider, M.A., D.Litt.Lond. 8vo. 1916. 10s. 6d. net. [University Press, Cambridge.]

The author has collected a mass of information regarding the historic development of the planning of the Greek house gleaned from archaeological sources. The circular tent-like hut developing into an oval form is exhaustively discussed, Lacustrine dwellings are touched upon, and early rectangular structures are dealt with fully. Cretan palaces are carefully studied and compared. The palaces at Mycenae,

Sirius and Arne on the Mainland can now be regarded as a faint reflection of the glory and brilliance of Cretan civilisation. Other domestic buildings are discussed, all leading up to and bearing upon the disposition of the Homeric House.

The author, after carefully studying these plans and the writing of Homer, gives a description of the house of Odysseus. It had a large principal room standing on the north side of a courtyard, with living and sleeping rooms and stables grouped round. There was an upper storey approached by a staircase, and certain offices at the rear.

As the women of Greece had more freedom than those of Rome no special planning appears to have been necessary. It was not till the second century B.C. that special apartments seem to have been called for, which is the Greek house described by Vitruvius. The author is of opinion that the house with two courts which he describes came into being about the same time. Plans are given of the ordinary Greek house at Priene with one court, and at Pompeii with two courts, to substantiate the conclusion come to.

Many of the plans appear to be mere foundation walls of stone. Certainly they were above ground, but were probably used as stores, offices and stables; the living rooms were often on the floor above, which was constructed of timber and jugged out in picturesque form from the stonework below. The usual plan, even to the present day, on this floor is a large hall with a room at the end, and smaller rooms and staircases at the sides, the fourth side having the windows: all quite compatible with the Homeric plan.

There are always difficulties in co-ordinating information and weaving it together as one consistent whole. The large number of interesting plans should have been so placed that the north of the compass points to the top of the page, not varying in all directions. In the description in the text the points of the compass are used for identification, and the want of regularity makes confusion and difficulty when comparing one plan with another. Of course unequal scales are unavoidable, but dimensions are found given in feet in one place and a few lines later in metres according to the author quoted. It would have repaid the trouble if one or other notation had been consistently used.

A few photographs and views would have materially lightened the reading, but we may perhaps look forward to a second volume by the author, dealing with the appearance of the Greek house with its decorative details, furnishings and accessories. Such a work of co-ordination would no doubt be less archaeological, but would be putting archaeological discoveries to a useful purpose, and not only be interesting but architecturally useful, especially at the present time when there is a distinct revival of the influence of the Greek ideals of taste.

A. E. HENDERSON, F.S.A. [Licentiate].

MARBLES.

British and Foreign Marbles and other Ornamental Stones.
By John Watson, Hon. M.A. Cantab. 8°. 1916. 5s. net.
[Cambridge University Press.]

The Cambridge University Press has just published Mr. John Watson's book on Marbles, which he modestly describes as a Descriptive Catalogue of the Specimens of British and Foreign Marbles and other Ornamental Stones in the Sedgwick Museum at Cambridge.

This is a companion volume to his valuable book on British and Foreign Building Stones, published in 1911. To architects these books should appeal with particular interest, for, in our opinion, there are no other works which give to architects the precise information they desire in the same clear and practical way as it is presented in these books.

It is owing to the indefatigable labour of Mr. Watson—and it has been a labour of love on his part—that the great collection of Building Stones and Marbles has been made from all parts of the world. The importance of the collection is recognised by those officially connected with the Sedgwick Museum at Cambridge, where in the Economic Section, on the ground floor, the collection is exhibited.

It is the economic value of this exhibition which will appeal to architects, and they will appreciate the commercial rather than the scientific definitions that have been adopted by Mr. Watson.

In his introduction to his book on Marbles he points out that the collection is intended chiefly for those who are studying economic geology, and he hopes that it may be useful to the students who are affiliated to the new School of Architecture at Cambridge. We hope and believe, and we have no hesitation in saying, that Mr. Watson's labours deserve to have a very much wider field of usefulness. It is a matter of first importance that the most suitable and procurable materials should be selected by the architect in practice, and at the Sedgwick Museum this unique collection of Building Stones and Marbles is open for his inspection. Here he can make a comparative selection, and with the assistance of the admirable descriptive catalogues he may learn of the weathering and other properties of the materials displayed before him. This book on Marbles, like its companion volume on Building Stones, is full of interest, for not only do we get a clear description of these materials, but also reference is made to buildings, from Classic times downwards, where they have been used.

In the use of marble for internal decoration Mr. Watson points out that you have a material incomparably superior as regards durability to anything that exists which is at all suitable for the purpose. This is undeniably true, though our insular prejudices will probably bind us to adhere to our commoner materials; but we entirely agree with him when he points out that "as an aid to Hygienics the use of marble is making rapid strides, and it is the opinion of some that the day is not far distant when the lining of the walls of sanatoria and hospital wards with marble, especially those set apart for the treatment of infectious maladies, will

be regarded as necessary. Nothing could be more wholesome and appropriate for the walls and floors of an operating theatre than marble; they can be cleansed continuously with a minimum of labour, and a complete absence of wear and tear."

We sincerely congratulate Mr. Watson. Through his energy the unique collection of Building Stones and Marbles has been brought together from all parts of the earth and he has arranged and classified them in the Sedgwick Museum. In addition to this he has compiled the books which describe the collection in a lucid and practical manner.

Mr. Watson has accomplished a great work and we hope that in the future it may be appreciated at its proper value.

GEORGE HUBBARD, F.S.A. [F.]

BUILDING CONSTRUCTION.

Architectural Building Construction. By Walter R. Jaggard, F.R.I.B.A., and Francis E. Drury, Fellow Inst. San. Engineers. Vol. I. 8°. 1916. 6s. net. pp. xxiv. and 303. [Cambridge University Press.]

The books on building construction written in a preceding generation were intended for all, but in recent years architects have been favoured with a number of books definitely written to instruct them in the philosophy and practice of the subject. There were the Building Construction volumes in the Architects' Library, and quite recently Rivington's celebrated Notes have been re-written by architects. Now we have the first volume of this *Architectural Building Construction*, by Messrs. Jaggard and Drury, which is rather different in its method from the previous volumes prepared for the use of architects.

The authors have a sound belief that "building construction should not be divorced from the principles of architectural design" (p. vii), and "by elucidating the details of construction of a whole building, a student, in his earliest study of the subject, is brought into contact with the necessity for treating each element of a structure as a unit in a complete scheme" (p. xi). Messrs. Jaggard and Drury have, therefore, designed two ordinary buildings and described their construction completely, claiming that this method does "enable them in a more or less pleasing manner to assemble the different units of the building and at the same time to inculcate a sense of completeness in the student's work" (p. ix).

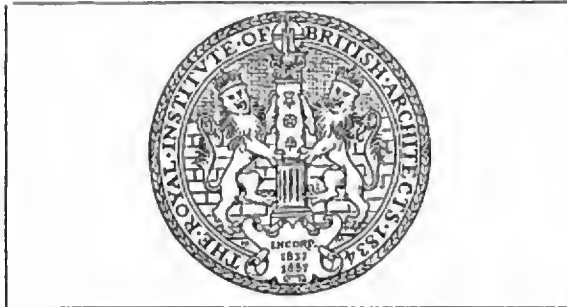
The two buildings chosen for examples, a cottage and a workshop, are first described in the text, and, incidentally, one may doubt whether the cottage could be carried out as described and illustrated in detail at 4d. per cub. ft. as the authors say (p. xix). The succeeding chapters follow the usual order of a specification—viz., Bricklayer and Mason, Carpenter and Joiner, Steelworker, Slater and Plumber. The Plasterer's, Glazier's and Painter's works, together with the materials, are described in Vol. II. The student who carefully studies these two volumes will acquire a very good knowledge of sound modern building construction.

The authors are to be congratulated on the completeness of their collaboration in the writing. One searches in vain for any evidence of dual authorship, and one wonders what would be the result on the succeeding volumes of a tiff between them! Which is the Walter Besant? Which the James Rice?

The illustrations are very well done, and full in detail. "The authors have often felt that the ordinary orthogonal presentation of examples of building construction does not sufficiently convey the solidity of the object to an elementary student, and . . . the illustrations have to a large extent been shown in perspective, isometric, or pictorial projection" (p. ix). Some of the examples have been shown as actually executed, by photographs: this, one thinks, might be developed still farther, to show how the subject of a detail or other drawing appears in reality. A new feature is the pocket at the end with working drawings of the cottage and the workshop.

The printing is good, and the binding strong and plain. There is but little to criticise; only minor matters such as, for instance, the superfluity of quotation marks. Why should "securing in position," on p. 212, and "sagging due to wear," on p. 214, be favoured in this manner? Also, should not the young architect have been warned not to make himself responsible for the design of the builder's temporary timbering in trenches and "centers," as described and illustrated on pp. 108-116? And the writer has a belief that bricknogged partitions (pp. 182-184) should have now a merely historical interest. A list or index of the illustrations would have been useful as they number 211. But these matters are not of much importance, and the book may be recommended as an original and valuable addition to the literature of the subject.

C. F. INNOCENT [A.].



9 CONDUIT STREET, LONDON, W., 21st October 1916.

CHRONICLE.

The R.I.B.A. Record of Honour: Thirty-fifth List.

Fallen in the War.

BULL, 2nd Lieut. JOSEPH WILLIAM [Associate], Royal Engineers. Died of wounds. Aged twenty-five.

The death, on 1st October, from wounds received on 26th September, of Lieutenant J. W. Bull has added another name to the Roll of those of our Institute who have made the great sacrifice. J. W. Bull was not known personally to many of our members, but was of those who were studying in order to be bearers of the torch. He was articled to Mr. Horace Dove, F.S.I., but feeling the call of the "Mistress Art," he commenced the study of architecture some seven years ago, and though he never showed exceptional brilliance, yet his love for the work carried him on, and he eventually passed his Final Examination and commenced practice as an architect some few months before the declaration of War. He joined the Artists' Rifles early in August 1914, and after some weeks' training was sent to France. On arrival there the Artists were formed into an O.T.C., and Bull was eventually gazetted to the 2nd East Lancs., but was attached to the Royal Engineers for special duty in connection with the erection of huts. He later resigned this commission, and was gazetted again as Lieutenant of the Royal Engineers.

I have known him for some years, and in directing his studies I was able to appreciate his sterling qualities, his optimistic yet withal serious outlook upon life, his gentlemanliness and honest uprightness of purpose. My sense

of loss at his early death is shared by his fellow-students and all those who had the privilege of his friendship.

W. R. JAGGARD [F.].

GRISSELL, 2nd Lieut. FRANCIS [Associate], Coldstream Guards. Killed in action, 15th September.

Second Lieutenant Grissell, who was the youngest son of the late Mr. Grissell, of Redisham Hall, Beccles, was educated at Warren Hill, Eastbourne, and at Harrow. He served his articles with Messrs. Nicholson & Corlette, and studied at the Royal College of Art, where he was awarded the Diploma in Architecture. He was engaged in the Clerk of Works' Office, King's College Hospital, and acted as Clerk of Works for the building of St. Mary's Church, Plymouth. He was afterwards for a time in the office of Mr. E. S. Prior, and was elected an Associate of the Institute in 1913. On the outbreak of war he enlisted in the Artists' Rifles, and later obtained a commission in the Coldstream Guards.

WEBB, 2nd Lieut. PHILIP EDWARD [Associate Member of the R.I.B.A. Council], Royal Engineers. Killed in action on 25th September. Aged thirty.

Second Lieutenant Webb was the son of Sir Aston and Lady Webb, and was educated at the Grange, Folkestone, and at Charterhouse. He passed through the Schools of the Royal Academy and the Architectural Association, and then entered his father's office and subsequently became a partner with him. He became a Student of the Royal Institute of British Architects in 1911, and was elected an Associate in 1912. He was at the time of his death an Associate Member of the Institute Council and a member of the Art Standing Committee. He was elected a member of the Architectural Association in 1905 and of the Council of that body in 1914, and in the same year became Hon. Treasurer of the Architects' and Surveyors' Approved Society. He joined the Royal Engineers as a Second Lieutenant after serving in the London University O.T.C., and was trained at Chatham and Deganwy in North Wales. He went out to the front on 24th July, and on the night of 25th September was sent forward on a special piece of work and soon after he started was killed instantly by a shell and was buried by his men where he fell.

At the meeting of the Council last Monday it was Resolved, upon the motion of the President, that an expression of the Council's very deep regret at the loss of 2nd Lieutenant Philip E. Webb, Associate Member of Council, be entered on the Minutes, and that a message of their sincerest sympathy and condolence be conveyed to Sir Aston and Lady Webb.

PHILP, Captain RICHARD MANNING HAIG [*Associate*], Royal Field Artillery. Killed in action. Aged twenty-eight.

Captain Philp was the only son of the late Richard Philp, of Geelong, Victoria, and Mrs. Philp, of Sydney, and grandson of the late Sir W. M. Manning, K.C.M.G., of Wallaroy, Sydney. He served his articles for four years with Mr. Walter Newman, of Sydney, N.S.W., and afterwards spent some months in European travel. In 1912-13 he attended the A.A. Day School course, and was elected Associate of the Institute in December, 1914.

RUSHWORTH, Captain TOM SADLER [*Associate*], of the 7th Battalion City of London Territorials. Killed in action on the Somme front, 18th September. Aged thirty-five.

Captain Rushworth was the second son of Mr. Wm. Rushworth [F.], Education Architect for the County Council of Durham. After completing his articles in his father's office, he obtained an appointment in the Housing Department of the London County Council, and became an Associate of the Institute in 1913. On the outbreak of war the battalion in which he was a subaltern volunteered for foreign service, and went to France in March 1915. Captain Rushworth was wounded at Vimy Ridge, and was mentioned in despatches for gallant conduct in the field. Writing to Mrs. Rushworth, his Commanding Officer says:

"Your husband was killed, I believe, instantaneously, by a shell, and so escaped any prolonged suffering. . . . It may, in time, be of some consolation to you to know that your husband and his company carried the two German trenches as brave Englishmen do, that the Generals congratulated the brigade on its fine work in capturing a strong position which had been attempted by other brigades several times before and in each case failed—a position which is of the greatest value to the British Army—and, though your husband laid his life down for his country, the bravery of his action is not in vain, sad though the loss must be to you. I lose a fine and brave officer, and we all mourn a valued friend and comrade."

PETCH, ERNEST SCOTT [*Associate*], 4th Royal Scots, Edinburgh [T.]. Posted as missing at the Dardanelles on 28th June, 1915, and now stated to be killed. Aged thirty-one.

Mr. E. Scott Petch was the son of Mr. J. Caleb Petch, architect and surveyor, of Scarborough. He was educated at St. Martin's Grammar School, Scarborough, and Silcoates College, Wakefield. He served his articles with his father, and passed the Final Examination and was elected Associate of the Institute in 1909. In 1911 he went to Edinburgh on the temporary staff of H.M. Office of Works, and left there in April, 1914, to enter a private firm, with the ultimate intention of joining his father in partnership. An old Territorial, he joined his regiment, attached to the 4th Royal Scots, immediately on the outbreak of war, and took part in the landing at Gallipoli on 28th June, 1915. He was at first reported missing, but his body was found on the field of battle in December, 1915, and was interred by his comrades.

TAYLOR, Lance-Corporal JOSEPH HENRY [*Associate*], Sanitary Section, R.A.M.C. Killed by a shell at Longuevalle on 28th July while acting as stretcher-bearer.

Lance-Corporal Taylor was articled to Mr. A. H. Ryan-Tenison, and attended the evening classes of the Architectural Association. He was elected an Associate of the Institute in 1908, and for the past five years had been on the unattached staff of the Architects' Department, London County Council.

JENKINS, Lieut. WILLIAM M. [*Student*], Welsh Pioneer Battalion, of Port Talbot. Killed in action. Aged twenty-five.

Lieut. Jenkins, when he enlisted, was in sole charge of the Land Valuation Department at Rhyl, Prestatyn, and St. Asaph, North Wales. He served his articles with Mr. Thomas Gibb, of Port Talbot. He was placed eleventh in the R.I.B.A. Intermediate Examination, and was a Professional Associate of the Surveyors' Institution.

BAGSHAW, ARTHUR SAMUEL [*Probationer*], West Kent Yeomanry. Killed in action. Aged twenty-seven.

Missing.

GUTTERIDGE, 2nd Lieut. RICHARD HOWARD [*Associate*], London Regiment. Reported missing in list of casualties published 11th October.

Awarded the V.C.

Captain Eric Norman Frankland Bell, of the Royal Inniskillings, is the first architect to receive the Victoria Cross, and it comes to him posthumously, for, as already announced in the JOURNAL, he fell in the early days of the Somme battle. The official record in the *London Gazette* of 26th September thus describes the splendid valour which won him the distinction: "He was in command of a trench mortar battery, and advanced with the infantry in the attack. When our front line was hung up by enfilading machine-gun fire, Captain Bell crept forward and shot the machine gunner. Later on, on three occasions, when bombing parties, which were clearing enemy's trenches, were unable to advance, he went forward alone and threw trench mortar bombs among the enemy. When he had no more bombs he stood on the parapet, under intense fire, and used a rifle with great coolness and effect on the enemy advancing to counter-attack. Finally he was killed rallying and reorganising infantry parties which had lost their officers. All this was outside the scope of his normal duties with the battery. He gave his life in his supreme devotion to duty."

Captain Bell was a student of the School of Architecture, Liverpool University, and was half-way through his course when war broke out and he volunteered for service. He had submitted two sets of designs as Testimonies of Study for the R.I.B.A. Final Examination.

Serving with the Forces.

The following is the Thirty-fifth List of Members, Licentiates, and Students R.I.B.A. serving with the Forces, the total to date being 68 Fellows, 494 Associates, 301 Licentiates, and 286 Students:—

FELLOW.

Hare, Henry T.: Lieut., Special Services, Army Service Corps.

ASSOCIATES.

Hickman, Ernest J.: Friends' Ambulance Unit, B.E.F.
Rigg, W. Arthur: 105th Training Reserve Battalion.
Williams, Enoch: Royal Engineers.



PHILIP EDWARD WEBB, *Associate*.
2nd Lieut., Royal Engineers.
Killed in action (see p. 229).



JOHN KINGSTON GROUND, *Associate*.
2nd Lieut., 10th Bn., Royal West Kent Regiment.
Killed in action (see p. 230).



ALFRED EDGAR STOTT, *Student*.
Private, King's Liverpool Regiment.
Died of wounds (see p. 232).



EDWARD WOODHOUSE STURMS, *Associate*.
Lance-Corporal, 72nd Section, 32nd Division.
R.A.M.C.
Killed in action (see p. 326).

LICENTIATES.

Cannon, F.: Army Veterinary Corps.
 Lane, G. W. C.: 5th West Yorkshire Regt.
 Maddick, George: 2nd Lieut., Army Service Corps.
 Wilson, T. Millwood: Royal Flying Corps.

Promotions, Appointments, &c.

Bax, G. Gordon [A.], Coy. Sergt. Major, Artists' Rifles, to 2nd Lieut., Machine Gun Corps.
 Bridgman, Gerald S. [Probationer], to 2nd Lieut., Royal Engineers.
 Broad, K. S. [A.], to Lieut., Leinster Regt.
 Buner, Henry Edgar [A.], to 2nd Lieut., Royal Engineers.
 Capper, Major S. H. [A.] has been on active service since mobilisation in August 1914, and holds the position of Military Censor in Charge at Alexandria.
 Curtis, S. Carey [A.], Captain, R.E., to Major Commanding Royal Engineers, Guernsey and Alderney District.
 Dicksee, Harold J. H. [Student], Sergeant-Instructor, Artists' Rifles, has been gazetted 2nd Lieut., General List, attached for duty with the Royal Flying Corps.
 Ewen, A. J. Clifford [Licentiate], Artists' Rifles, to 2nd Lieut., Worcestershire Regiment.
 Gutteridge, R. H. [A.], Artists' Rifles, to 2nd Lieut., 9th London Regt. (Queen Victoria's Rifles).
 Hall, H. Austen [F.], Sub-Lieut., R.N.V.R.
 Jones, C. H. Montagu [A.], R.N.A.S., to Lieut., R.G.A., A.A. Gun, Shotley, Suffolk.
 Newman, B. Leigh [Licentiate], to 2nd Lieut., R.E., from Canadian A.S.C.
 Papworth, A. Wyatt [A.], to 2nd Lieut., Royal Engineers, No. 2 Depot Co., Newark-on-Trent.
 Pett, H. Milburn [A.], to Lieut. and Inspector of Works, Staff for R.E. Services.
 Pierce, 2nd Lieut. A. Raymond [Licentiate], Royal Garrison Artillery, has been obliged to relinquish his commission on account of ill-health.
 Webb, Maurice E., Lieut., R.E., to be Captain.
 Whiteley, C. T. [A.], Artists' Rifles, to 2nd Lieut., 2/8th R. Warwick Regt.

Members' Sons Fallen.

Continuing the record of members of the Institute who have lost their sons in the War, in addition to those whose sons' names appear on the R.I.B.A. Roll, the death in action is announced of Captain Edgar George Fellowes Prynne, Royal Fusiliers, attached London Regiment, son of Mr. G. H. Fellowes Prynne [F.]. He was reported missing on 16th September, but his body is now stated to have been found on 5th October in front of enemy trenches since occupied by our troops. Captain Fellowes Prynne graduated at Selwyn College, Cambridge, taking his B.A. degree in July 1914. He was stroke of his college boat for two years. He joined the army from the Cambridge O.T.C. immediately on the outbreak of war.

Mr. Henry F. Kerr [A.], of Edinburgh, has lost his only son, 2nd Lieut. Henry T. R. Kerr, aged twenty-one, who was reported missing after a bombing attack, and is now reported by the German authorities to have died of wounds. He enlisted in the Royal Scots in November 1914, and a few months afterwards received a commission in the Cameron Highlanders.

Restrictions upon Private Building.

The Ministry of Munitions forwards the following for publication:—

The continued demand for labour for the construction of munition factories and other buildings of urgent national importance and the enormous demand

for steel for the purposes of the war have compelled the Ministry of Munitions, in the national interest, to place certain restrictions upon private building. It would be idle to pretend that the restrictions will cause no inconvenience. What is important to make clear is that such inconvenience as the regulations may entail is an unavoidable consequence of the nation's urgent need.

Every trade in the country has had to take its share in the great task of finding men for the Army. The building trade has had the additional duty of assisting in the equipment of the Forces, for the immense increase in the output of munitions could never have been achieved if new factories had not been constructed at unexampled speed. Nor is the work by any means finished. Mr. Montagu in his statement in the House of Commons said: "I hope that the country will not think that all has been accomplished." There are, indeed, many new factories which urgently require more building labour for their completion, and the housing of those who are to work in the factories is also a problem which must be faced. At the same time every available man must be released for service in the Navy or the Army.

It is obvious that under these conditions private building must be restricted, and that building labour must be used to supply the most urgent national needs. The necessity for restriction is made still greater by the fact that the use of constructional steel in private building work limits the available supply of a material which is essential for the prosecution of the war.

Some inconvenience all those connected with the building industry must be prepared to face—in the interests of a nation at war. The demand for building labour for munitions factories and other national work is large. The public would be well advised to take advantage of the period during which the regulations are in force to get plans prepared for future undertakings, so that work may be ready to start when the demobilisation of the Army begins after the war. If this can be prepared for beforehand it will be of great advantage when the problems of demobilisation become urgent.

The Future of Charing Cross.

An interesting statement dealing with the Charing Cross Improvement Scheme, prepared by Mr. John Burns [Hon. F.], Sir Aston Webb, R.A. [F.], and Mr. Reginald Blomfield, R.A. [F.], is being published by instalments in the *Observer*.

Part II., published on the 15th, after criticising the existing station and bridge as unsightly, inadequate, and an insuperable obstacle to the development of London, goes on to show the crying need for a roadway bridge from Charing Cross to the Surrey side. All vehicular traffic from the south side opposite has now to come either by Westminster Bridge or Waterloo, and the blocks on both bridges are a serious inconvenience to the public, particularly in the case of Waterloo Bridge, where the congestion produces that familiar and most irritating holding-up of the traffic at the Strand crossing. The distance between



FRANCIS GRISWELL, Associate.
2nd Lieut., Coldstream Guards
Killed in action (see p. 333).



JOSEPH HENRY TAYLOR, Associate.
Lance-Corporal, Sanitary Section, R.A.M.C.
Killed in action (see p. 340).

Westminster and Waterloo Bridges is greater than that between any other two London bridges. The distance between London Bridge and Southwark is about 480 yards, between Blackfriars and Waterloo 960 yards, between Waterloo and Westminster 1,200 yards.

The objects of those who oppose the spending of money on the railway bridge are to prevent the perpetuation of the existing artistic atrocity, to have the station transferred to the south side of the river, and to have in connection with this new station and existing main arterial roads a new roadway with a magnificent bridge landing on the north side of the river somewhere in the neighbourhood of Trafalgar Square. The London County Council is undoubtedly the authority to take up the scheme and carry it through, and with them would co-operate, it is hoped, His Majesty's Government, the Port of London, the Corporation of the City of London, the Westminster City Council, and the Lambeth Borough Council. As to whether the bridge should be high-level or low-level, the writers are disposed to favour the high-level as involving less interference with navigation. The new bridge, too, should be kept clear of the site of the present one. If it follows the line of the existing bridge, or even cuts across a part of it, serious difficulties would arise. Other considerations put forward are the following:—

(a) Subject to the securing of a bridge worthy of this great enterprise, as large a part as possible of the site of the present station and its approaches should be preserved for building developments.

(b) The new bridge and roadway should link up the main roads on the Middlesex side with the main arterial roads leading south and south-east on the opposite side.

(c) The scheme should secure for the public, not only

improved facilities of traffic, but also a great and monumental achievement worthy of this unparalleled occasion. What is wanted is not only the skill of our engineers and the invention of our artists, but the help of Nature herself must be enlisted in the sense that we want plenty of light and air, ample spaces in which we can see the sky, and where we can get far back enough to enjoy the wonderful play of cloud and sunshine on the buildings of our City and on the river that divides them.

The concluding instalment, to be published in the *Observer* on the 22nd, will embody suggestions for the building of a new vehicular bridge, and for the transference of the station to the south side.

OBITUARY.

James Burgess, C.I.E., LL.D., F.R.S.E. (*Hon. A.*).

Dr. James Burgess, who died at his residence in Edinburgh on the 5th October, at the age of eighty-four, had been an Hon. Associate of the Institute since 1888, and had written for the *JOURNAL* on Indian archaeological subjects. Dr. Burgess went out to India as an architect in the days before the Mutiny, and subsequently did educational work, first in Calcutta and then in Bombay, where he was secretary of the local geographical society. He founded in 1872 the *Indian Antiquary*, which he conducted for twelve years. In 1874 he was appointed Archaeological Surveyor for Western India and a few years later for Southern India as well. In the last three years of his official career, he was Director-General of the Archaeological Survey of India. Dr. Burgess did much to pave the way for the systematic researches of the present day by his detailed reports, with

photographic illustrations, of Indian archaeology, which have been of great assistance to scholars. Of his many descriptive monographs those on Elephanta, the Temples of Somanath, Junagadh, and Girnar, and on the Ajanta Paintings are, perhaps, best known. He collaborated with Fergusson in his *Cave Temples of India*, published thirty-six years ago; and in 1910 was associated with the late Mr. Phénix Spiers in an amplified edition of Fergusson's standard *History of Indian and Eastern Architecture*. He also assisted Miss Duss (now Mrs. Rickmers) in her *Chronology of India*, and in 1913 he completed this undertaking by the issue of a supplementary volume for modern India (1494-1904). In 1898 he was awarded the Keith Medal of the Royal Society of Edinburgh for his Paper "On the Error-function Definite Integral."

Sir James Linton, P.R.I. [*Hon. A.*].

Sir James Drumgole Linton, President of the Royal Institute of Painters in Water-Colours, died on the 3rd October, aged seventy-five. He had been an Honorary Associate of the R.I.B.A. since 1897. Soon after his training as an art student, he began to exhibit works both in water-colour and in oils. His talent lay in the direction of figure and costume painting, and he gained much popularity by drawings representing some favourite historical incident and renderings of Shakespearean episodes. He was a well-known book illustrator, and was a regular contributor to the Royal Academy exhibitions. Sir James was President of the Royal Institute of Painters in Water-Colours from 1884 (when he carried through the building of the new galleries in Piccadilly from Mr. E. R. Robson's designs) till 1899, and again from 1909 till his death.

NOTICES.

Session 1916-17: Programme of General Meetings.

- Nov. 6.—GENERAL MEETING (ORDINARY): President's Opening Address.
 Dec. 18.—GENERAL MEETING (BUSINESS): Election of Members; Nomination of candidates for membership.
 Jan. 8.—GENERAL MEETING (BUSINESS): Election of Members.
 Feb. 5.—GENERAL MEETING (ORDINARY): Announcement of the Council's Nomination for the Royal Gold Medal; Nomination of Candidates for Membership.
 Mar. 5.—GENERAL MEETING (SPECIAL AND BUSINESS): Royal Gold Medallist Election; Election of Members.
 May 7.—ANNUAL GENERAL MEETING: Nomination of Candidates for Membership.
 June 4.—GENERAL MEETING (BUSINESS): Election of Members; Election of Council, &c.
 June 25.—GENERAL MEETING (ORDINARY): Presentation of Royal Gold Medal.

THE FIRST GENERAL MEETING (ORDINARY) of the Session 1916-17 will be held Monday, 6th November, 1916, when the Chair will be taken by the President, Mr. Ernest Newton, A.R.A., at 3.30 p.m. precisely, for the following purposes:—

To read the Minutes of the General Meeting (Ordinary) held Monday, 19th June; to announce the names of candidates for membership; to admit members attending for the first time since their election.

Mr. ERNEST NEWTON, A.R.A., to deliver
 THE OPENING ADDRESS OF THE SESSION.

Election of Members.

In accordance with the provisions of By-law 8, the names and addresses of the following Applicants for Candidature are published herewith for the information of Fellows and Associates. Notice of any objection or other communication respecting them must be sent to the Secretary R.I.B.A. for submission to the Council prior to Monday, the 6th November. The day of election is the Business Meeting to be held Monday, 18th December.

AS FELLOWS (8).

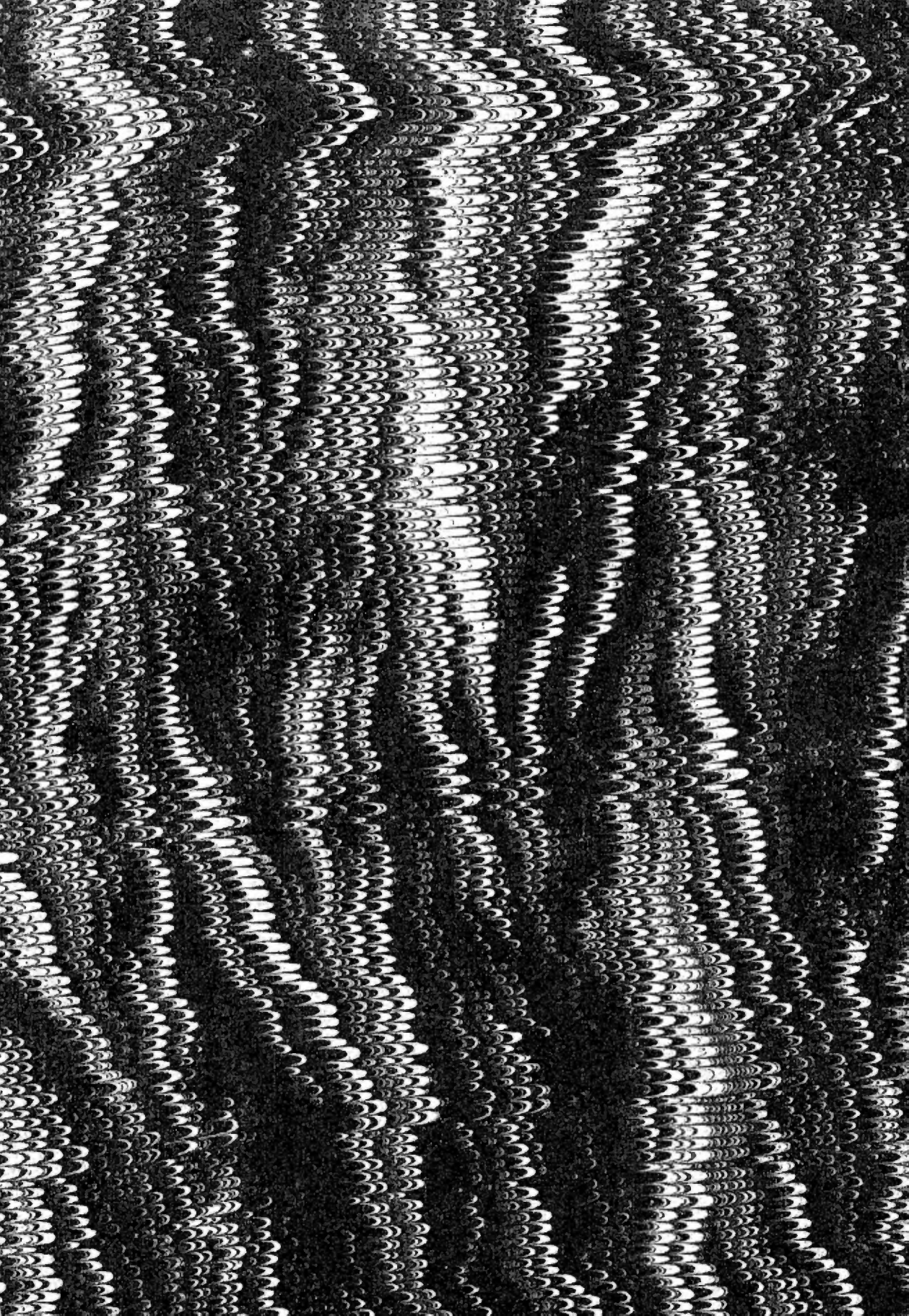
- CHATTERTON: FREDERICK [*Associate*, 1896]; Ministry of Public Works, Cairo, Egypt; and Turf Club, Cairo.
 EDWARDS: ARTHUR CECIL MORRIS [*Associate*, 1908]; Sea Road, Cooden Beach, Bexhill-on-Sea.
 REAVELL: GEORGE [*Associate*, 1899]; Lloyd's Bank Chambers, Alnwick; and Prudhoe Street, Alnwick; together with the following Licentiates who have passed the Qualifying Examination:
 ALDER: JOHN SAMUEL; 1 Arundel Street, Strand, W.C.; and 33 Bedford Gardens, Kensington, W.
 ALSOP: RODNEY HOWARD; 90 William Street, Melbourne.
 FERRIER: CLAUDE WATERLOW; 11 Waterloo Place, Pall Mall, S.W.; and 34 Cavendish Square, W.
 GORDON: WALTER SYMINGTON ATHOL; 5 Old Bond Street, W.; and Holland Lodge, Walton-on-Thames.
 LEY: ALGERNON SYDNEY RICHARD; 214 Bishopsgate, E.C.; and Montague House, Sidcup, Kent.

AS ASSOCIATES (12).

- All candidates passed the Final Examination last June.
 ARMSTRONG: JOHN RAMSAY; Admiralty Works Department, Perth, Scotland; and 2 Marshall Place, Perth.
 BRANDON: CHARLES JOSEPH; 7 Trebovir Road, Earl's Court, S.W.
 ELLISON: ROBERT KITCHING; Shire Hall, Bedford; and 13 Shaftesbury Avenue, Bedford.
 FOULKES: SIDNEY COLWYN; Central Chambers, and Mansfield Groes Road, Colwyn Bay.
 HOLMAN: ARTHUR ROWLAND; Castle House, Exeter; and Strand, Topsham, Devon.
 HUTTON: LORNE DE H.; 11th Officers' Cadet Battalion, Staff College, Camberley, Surrey.
 KEEP: NORMAN PRISTO; c/o Wontner Smith, Esq., 12 Gray's Inn Square, W.C.; and 15 Belleville Road, Wandsworth Common, S.W.
 LOWRY: ROBERT; 5 Park Road East, Twickenham.
 LUYKEN: HEINRICH MARTIN; Chief Engineer's Office, Port of London Authority; and 23 Arcadian Gardens, Wood Green, N.
 SPARROW: ARTHUR JOHN; 12 Russell Square, W.C.; and Ingram House, Stockwell Road, S.W.
 TODD: HAROLD EDOAR; 15 Clare Street, Bristol; and Harts Cottage, Almondsbury, near Bristol.
 WILSON: JAMES FREDERICK; Borough Architect's Department, Town Hall, Newport, Mon.; and 40 Upton Road, Newport, Mon.

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